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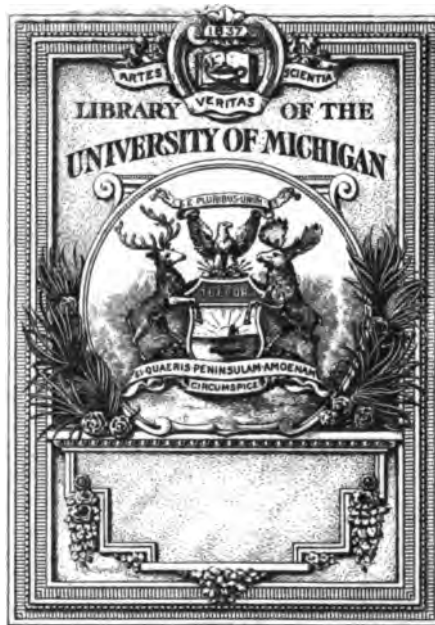
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U. S. DEPARTMENT OF AGRICULTURE,  
U. S. WEATHER BUREAU.

Bulletin C.

(Part 7 in sheep brand weather report-)

Serial no.

RAINFALL AND SNOW OF THE UNITED STATES,

COMPILED TO THE END OF 1891,

WITH

ANNUAL, SEASONAL, MONTHLY, AND OTHER CHARTS.

BY

MARK W. HARRINGTON.  
CHIEF OF THE WEATHER BUREAU.

Published by authority of the Secretary of Agriculture.

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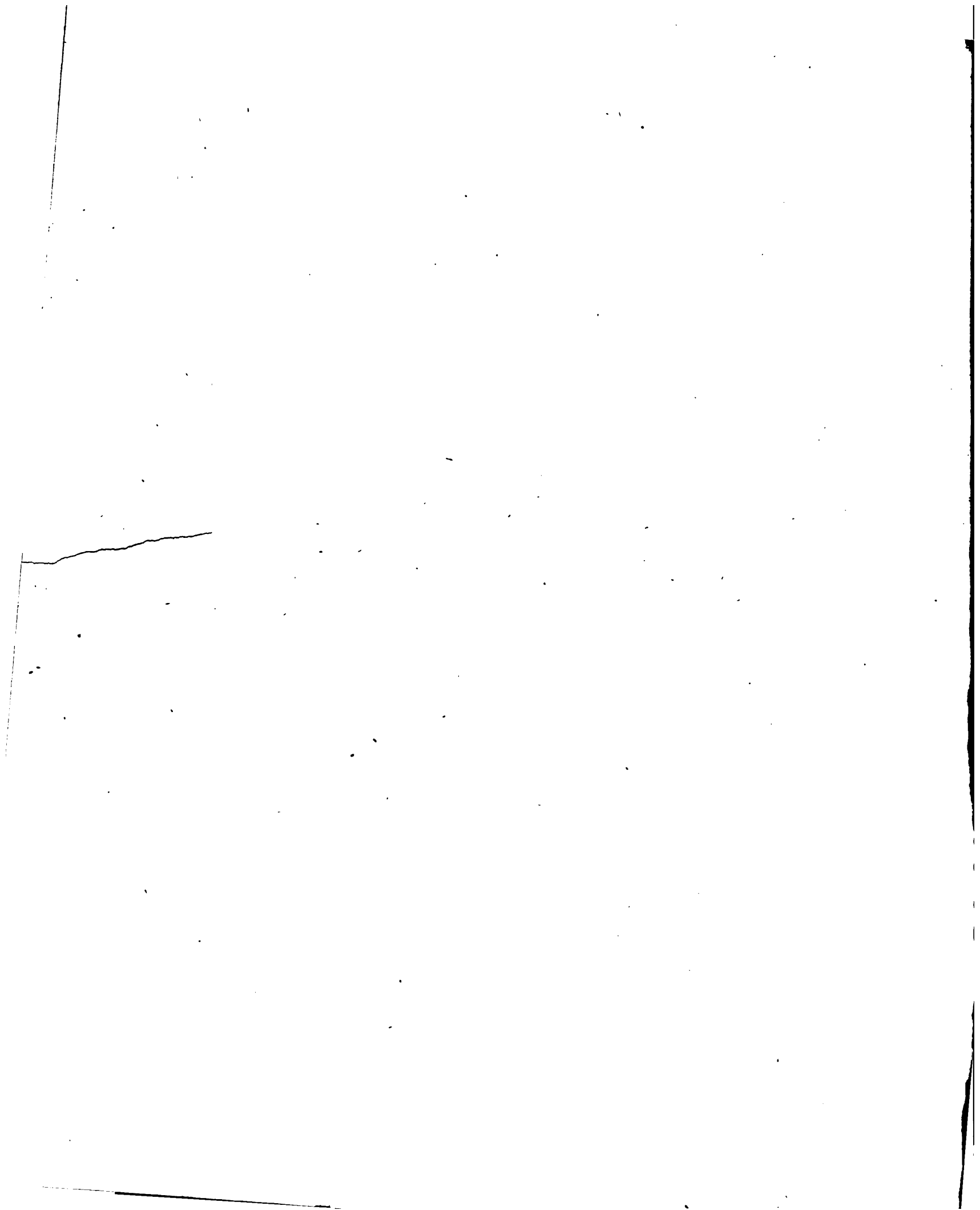
U. S. DEPARTMENT OF AGRICULTURE,  
WEATHER BUREAU,  
*Washington D. C., April 30, 1894.*

SIR: I have the honor to transmit herewith a paper on the "Rainfall and Snow of the United States, Compiled to the End of 1891, with Annual, Seasonal, Monthly, and other Charts," and to recommend its publication as Weather Bureau Bulletin C. The charts referred to have already been published in atlas form under the same title.

Very respectfully,

MARK W. HARRINGTON,  
*Chief of Weather Bureau.*

Hon. J. STERLING MORTON,  
*Secretary of Agriculture.*



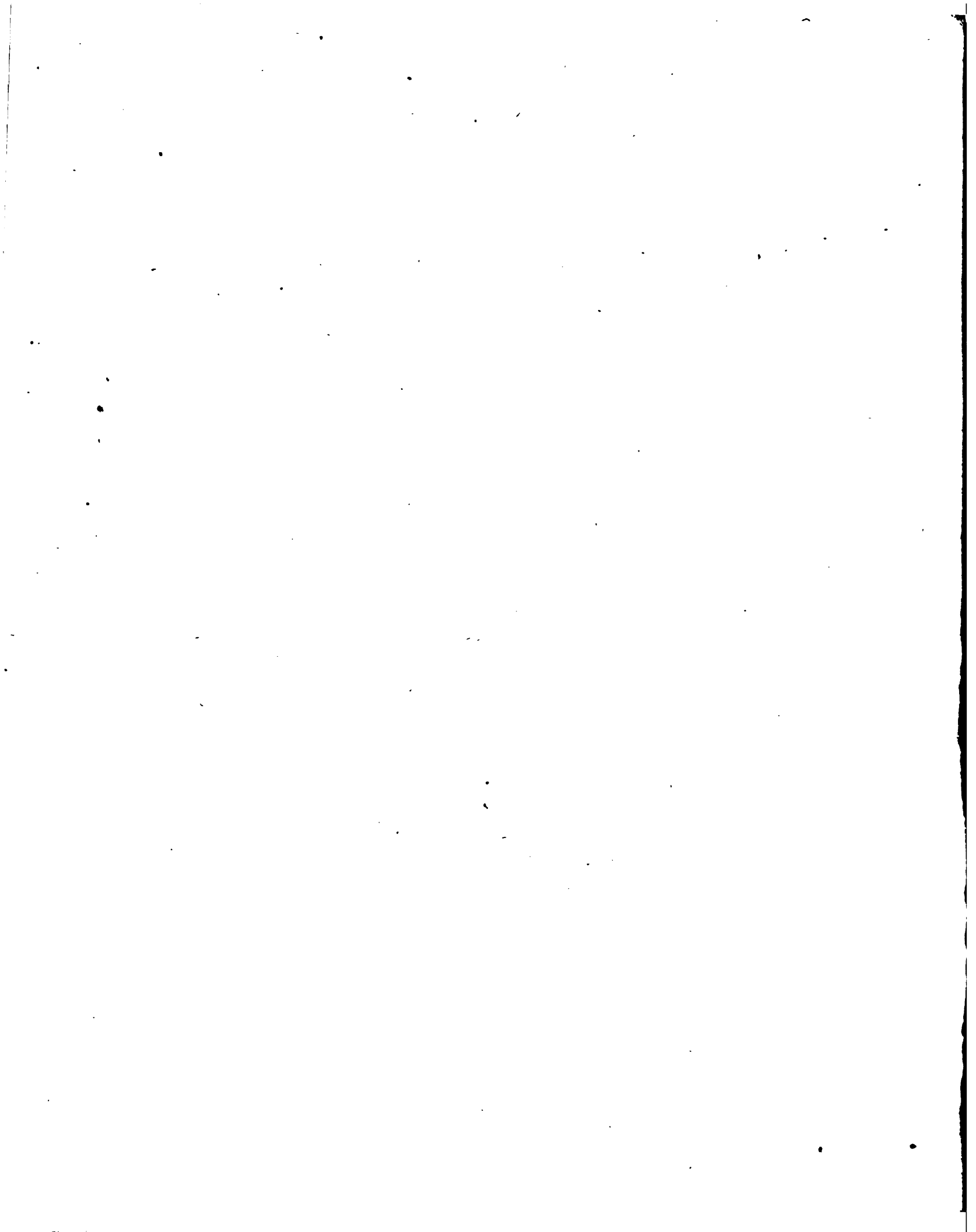


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(The following charts are printed in separate form as Weather Bureau Bulletin C—Atlas.)

Charts i to xii.—Rainfall, January to December.  
 Charts xiii to xvi.—Rainfall for seasons.  
 Chart xvii.—Rainfall for the year.  
 Chart xviii.—Snowfall, in inches.  
 Chart xix.—Monthly maxima of rainfall.  
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 Chart xxi.—Monthly minima of rainfall.  
 Chart xxii.—Details of rainfall.  
 Chart xxiii.—Details of occurrence of thunderstorms.



## INTRODUCTION.

The statistics of rain and snow, here given, include the most important series of observations that have been made from the early settlement of the country to the close of the year 1891.

The collection embraces the records originally contributed to the Smithsonian Institution in manuscript and others collected by that Institution from private individuals, those from the published journals of scientific societies and other associations, those made under the direction of the Medical Department of the U. S. Army, the Lake Survey, the Regents of the University of the State of New York, the Central and Southern Pacific Railways, the various State Weather Services and meteorological associations, the Signal Service and, finally, the Weather Bureau which succeeded it.

In forming the tables which appear here, reference was had, primarily, to the abstracts of monthly and annual amounts of precipitation already tabulated and in the files of the Records Division. Through the courtesy of the Secretary of the Smithsonian Institution permission was given, a few years since, to copy the manuscript tables collated by Mr. Charles A. Schott, Assistant, U. S. Coast Survey, and used by him in the preparation of tables and results of the precipitation in rain and snow in the United States (Smithsonian Contributions to Knowledge, No. 353, 1872, 2d ed., 1881). The tables thus copied were brought down to date by the addition of the monthly and annual amounts for later years, when the observer continued his observations under the direction of the Signal Service and the Weather Bureau, and new abstracts were formed for stations occupied subsequent to 1874. Abstracts of the monthly and annual amounts of precipitation at each station in the United States, at which a record had been kept, were, therefore, available at the time the present work was begun.

The degree of precision with which the observations were made, excluding those of the Signal Service and Weather Bureau, must vary within a considerable range, according as the observers were possessed of more or less skill and intelligence. It rarely happens that an inexperienced person appreciates the importance of making a record of the occurrence of so simple a phenomenon as the fall of rain and snow in such a manner as to render it perfectly intelligible within itself. The omission of so manifestly important an entry as "no precipitation" where none occurred has led to much embarrassment in abstracting the monthly amounts, but not so great perhaps as the uncertainty which attaches to no inconsiderable number of records as to whether or not the snow has been melted and included in the total precipitation.

The accuracy of the tabulated results has been tested in several ways, principally by a comparison of the variations for corresponding months and years at surrounding stations situated under approximately similar conditions. Such other methods as the circumstances of each case would suggest have been used, and the results checked by further comparisons with the amounts obtained by trained observers of the Signal Service and Weather Bureau at stations in the same locality. The records of the latter, of which there are upward of 300 scattered throughout the United States have been given more weight than other series, since they were made under similar conditions and with more than an ordinary degree of care and accuracy. Of the voluntary observations as a whole it may be said that, so far as the broader features of rainfall variations are concerned, we can use the records as given without fear of serious error. A few cases of systematic under or over measure-

ment have been discovered, and there are also a few cases in which a portion of the record is of doubtful accuracy; all such instances, however, have been indicated by appropriate foot notes.

The diversity of sources from which these observations have been drawn has caused a considerable diversity of instruments and their exposure. From 1833 the Regents of the University of New York used a conical gauge, and their indorsement caused it to be used elsewhere. The Army Medical Department used the conical gauge from 1836 at many stations. The gauge first used by the Smithsonian Institution (1855-'70) depended for its accuracy on the well-made metallic rim of the funnel over the receiver and on the graduated tube into which the rain was emptied from the receiver. Later the funnel was replaced by a metallic receiving cylinder with a smaller brass measuring cylinder, with a whalebone scale, divided by experiment so as to show tenths and hundredths of an inch of rainfall. Later still, some of the receivers were furnished with a conical bottom, the measuring tube was dispensed with, and the whalebone measure stick replaced by a wooden one. The rain gauge adopted by the Signal Service and retained by the Weather Bureau is of the same pattern. It is described in the publications of the Bureau. Recently, automatic registers have been introduced at many stations.

The older method for snow measurement, and a method often used yet, consists in getting the average fall of snow in the vicinity of the station and reducing it to its equivalent in rainfall by dividing by ten. At all regular stations the snow is melted to get the equivalent in water.

The exposure of the rain gauge is of especial importance, and in the earlier years of observation was not controlled, nor is it now, except by advice, at voluntary stations. Much stress was formerly placed on the height at which the gauge was placed. The New York Regents chose 8 feet and cautioned against more than 10. The Smithsonian Institution had its gauges placed flush with the ground. It is now known that the height is not of so much consequence, but that the important matter is to prevent wind-breaks or eddies. Doubtless the diversity of exposures has caused many discrepancies in monthly and annual mean values of rainfall, but a comparison of long series of observations with several changes of instruments and localities shows that these are of minor importance in the geographical comparisons to which this paper is chiefly devoted.

The actual work of preparing the tables used was entrusted to a force of clerks under the immediate supervision of First Lieut. B. M. Purssell, Nineteenth U. S. Infantry, detailed for temporary duty with the Weather Bureau. Lieut. Purssell had free access to the records of the Bureau, selected the stations for which tabulated results are given, and took the usual precautions to ensure the numerical accuracy of the various computations which appear in the work. Values in bold-face type which appear in the tables are approximations obtained, as a rule, by using the observed amount at the nearest stations, augmented or reduced according to the constant differences between the rainfall at the two stations. After the tables had been completed, it was found that many additional 5-year averages could be obtained by approximating a few months' records. The latter approximations were not used in obtaining the general sums and averages.

The construction of isohyetal charts from the data prepared under the direction of Lieut. Purssell was referred to a board composed of Maj. H. H. C. Dunwoody, Signal Corps, Assistant Chief of Weather Bureau, First Lieut. B. M. Purssell, Nineteenth U. S. Infantry, and Prof. H. A. Hazen.

On Lieut. Purssell's relief from further duty with the Weather Bureau, Mr. George F. Flint assumed charge of the work, then in an almost completed state, and later, the editorial supervision of the tables was delegated to Mr. A. J. Henry, of the Records Division. Mr. Henry and Mr. A. McAdie, confidential clerk, have aided me in revising the manuscript and reading the proof.

The previous publications of especial importance on the rainfall of the United States, as a whole, are the following:

Blodget, Lorin. *Climatology of the United States, etc., with isothermal and rain charts.* 8vo. Phila., 1857.

- Schott, Charles A. Tables and results of the precipitation in rain and snow in the United States. Smith. Cont. to Knowl., 222. 4to. Wash., 1872.  
The same: 2d ed. 4to. Wash., 1881.
- Schott, Charles A. Rain chart of the United States, showing the distribution by isohyetal lines of the mean precipitation in rain and melted snow for the year. Constructed from materials collected and observations made for the Smithsonian Institution, with additions to 1872. In U. S. Census Office Statistical Atlas. Fol. Wash., 1874, pl. 5.
- U. S. Signal Service. Charts showing the rainfall in the United States for each month from January, 1870, to December, 1873, based largely on reports from voluntary observers. 4to. Wash., 1888.
- Dunwoody, H. H. C. Charts and tables showing the geographical distribution of rainfall in the United States. U. S. Signal Service Prof. Papers, No. IX. 4to. Wash., 1883.
- National Academy of Sciences. Vol. V. Second memoir. Contributions to Meteorology. Chapter III. Revised edition. Rainfall. By Elias Loomis. 4to. Wash., 1892.
- U. S. Monthly Weather Review. Rainfall charts. (1873-'93.)

Prof. Loomis' paper was drawn up from the dynamic rather than the climatic standpoint, and the last is a series of monthly charts. The dates of the more general contributions are about ten years apart, 1857, 1872, 1883. This paper for 1894 continues the series at about the same interval.

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# RAINFALL AND SNOW OF THE UNITED STATES.

## I.—MEAN AMOUNTS OF RAINFALL.

The mean monthly, seasonal, and annual amounts of rainfall and melted snow are given on charts i to xvii, inclusive. The lines of equal rainfall (isohyetal lines) are drawn for each inch of rainfall on the monthly charts. On the seasonal charts they are drawn for each 5 inches, except for regions where the seasonal total is 5 inches or less. In these regions the isohyets are put in for each inch up to 3 inches. On the annual charts they are introduced for each 5 inches in areas where less than 10 inches fall annually, and elsewhere for each 10 inches.

In order to give precise information, where possible the actual mean amounts of rainfall have been given in figures on the maps over the stations where the rainfall is small. The number of years covered by the observations can be determined from the tables which accompany this paper. In general, no series of observations of less than five years has been used. The few exceptions to this rule have been in areas where the observations were needed to fill out the map.

Table I gives the annual amounts for each year and the means for the 5-year periods, beginning with the first and sixth years of each decade. The mean annual amount will not necessarily be the mean of these periods, because the former generally contains the results of observations in fractional parts of the 5-year periods.

A careful inspection of the charts will give an infinity of details of which each reader may obtain those most interesting to himself. The following points only will be selected for discussion because they are of general interest:

1. *Least rainfall.*—The least rainfall in the United States is found in the west and southwest. The limit of least rainfall for the purpose of this discussion will be taken at 1 inch per month, which is equivalent to 3 per season, and 12 per year. The area over which 1 inch or less per month of rain descends is migratory for the months, and in order to show the migrations Map 1 of Sheet xxii has been constructed. In order to make them plain and easily comprehensible the lines have been generalized, but the main facts are entirely correct as shown.

The area of least rainfall, as defined above, is smallest in April. At this time it occupies New Mexico, the most of Utah and Nevada, and parts of the adjoining States. The line of 1 inch of rainfall begins at the great bend of the Rio Grande, runs northwestward to Salt Lake City, thence westward to the vicinity of the boundary of California, thence southward and a little eastward to a point between San Diego and Yuma. By May the western boundary of this area has traveled westward and strikes the Pacific coast. The end of the line on the Pacific coast then progresses gradually northward with the succeeding months until, in August, it leaves the coast and the line crosses the area of the United States approximately from north to south. Meantime the heavier rainfall has begun in the extreme northwest, and a western boundary of the area appears in this month for the first time. The area in August, therefore, is bounded on the east by a line which is, approximately, the meridian of 115°. It is bounded on the west by a line which crosses the extreme northwestern angle of the States. The area which, in April, was bounded on the north has, by August, become a band crossing the United States. With the succeeding months this band travels gradually eastward and reaches its extreme eastern position in the winter months. It is outlined in this extreme position on the map. The eastern boundary extends from Rainy Lake on the north to

a point on the Rio Grande on the south not far west of Rio Grande City. The western limit is now, approximately, the meridian of  $115^{\circ}$ . With the beginning of spring the area travels rapidly westward, and by April it has taken up the position with which we began. This area, therefore, begins in a relatively small space in the southwest, in the interior, spreads up the Pacific coast, then travels eastward, reaching its eastern limit in winter, then contracts again to occupy its least area in April.

In this band there is generally a number of small areas where the rainfall is more than 1 inch per month. These are islands of higher rainfall in the general area of least rainfall. They are usually mountain regions, and they are much more extensive in the largest expansion of this area, in winter, than they are in the smallest, in April. Taking into account these islands the April extent of the area of least rainfall in the United States is about 400,000 square miles. The winter (greatest) extent is about 1,000,000 square miles, or, approximately, one-third of the total area of the United States, excluding Alaska.

The area of least rainfall is not confined to the United States. It extends to the southward over Mexico, and this extension continues during the whole of the year. There is an extension northward which begins in July and lasts until March. In the period of greatest extension in the United States, namely, in winter, the band extends northward and slightly eastward, and probably occupies the plains to the north of us, finally joining the Arctic area of least rainfall.

An interesting fact concerning the area of least rainfall is that little, if any part, of the United States is within it during all months of the year. Even the dry areas of Nevada are outside of this band during the winter, and the dry areas of Arizona are outside of the band in August. A more detailed examination may show that a small corner of southwestern Arizona and southeastern California remain within it during the entire year; but observations are too sparsely scattered over this region to enable us to settle the matter positively.

2. *Greatest rainfall.*—To test the areas of greatest monthly rainfall in the United States, I have taken a maximum of 6 inches of rain in a month and have studied the areas over, and the months in, which it occurs. As a result it appears that there are six different regions in the United States where the rainfall is, in some months, above 6 inches. These are shown on Map 2 of Sheet xxii, and will be considered in succession.

The first (*a*) is in the extreme northwest. It begins at Tatoosh Island, Wash., in October. It gradually increases and reaches its greatest extent in December. At this time the line of six inches of rainfall, entering the United States on the north, south of Vancouver Island, extends down along Puget Sound; thence southward to Mount Ranier; thence eastward along the Columbia River up to the Cascade Mountains and back to the Willamette; thence south, not far from the coast, disappearing on the coast not far to the north of San Francisco, Cal. The highest monthly rainfall at this time is 14.5 inches in the vicinity of Tatoosh Island, Wash. There is a small outlier to this area on the Sierra Nevada Mountains.

The second area (*b*) is a very variable one in Alabama and Mississippi and extending to some extent into the adjoining States. It begins in January and continues until March. Its greatest extent is in March and is as shown on the map. The highest rainfall in this area is 9 inches in March.

The third area (*c*) is one in northeastern Texas, extending slightly into Indian Territory. It is found there only on the maps for April and May. It reaches its greatest extent, as shown on the map, in May, and the highest rainfall within its borders is 9 inches.

The fourth (*d*) is a small patch to be found in northern Missouri in May and June. The highest rainfall in this area is 9 inches.

The fifth (*e*) is a curious and interesting area, beginning properly in March and continuing to October, but found on the monthly map also for January. It begins at Cape Hatteras, extends gradually inward, never reaching far from the coast, and attains its extreme limit in July and



August. At this time it covers extreme southeastern Virginia, the eastern third of North Carolina, and a considerable part of the coast of South Carolina.

The sixth area (*f*) is the region of subtropical rains in Florida. It begins in June and ends in October. Its greatest expansion is in July, and also the greatest rainfall, which amounts to about 10 inches. It covers all of Florida in July, except the extreme southern point of the peninsula. It extends also into southern Georgia, thence westward along the Gulf coast to the middle of the coast of Louisiana.

Referring to area *b*, as just described, it appears that within it there is a small area of unusually high rainfall at the southern extremity of the Appalachian Range. It is within the region on the annual map marked by the line of equal rainfall of 60 inches. This is distinctly a part of area *b*, as above described, but it differs from the rest in not being seasonal. The high rainfall in this small region continues with fair uniformity from season to season. Attention has been especially called to this area by Mr. B. C. Hawkins, voluntary observer of the Weather Bureau at Horse Cove, Macon Co., N. C. He says, in a special report for 1893:

I wish to call the attention of the Weather Bureau to the fact that there is a small area, embracing, probably, parts of Macon, Jackson, and Transylvania counties, N. C.; Oconee County, S. C., and Rabun County, Ga., that has an annual precipitation of over 76 inches. Records for about seven years at Highlands, Macon Co., N. C., give an average of over 76 inches. Apparently, this area does not include the western part of Macon County; for Franklin has an average of over 57 inches in twelve years. I have records for two years here [that is, at Horse Cove], the total for 1892 being 93.33 inches, the largest annual total east of the Mississippi River. There are no other stations in this "rainy area", unless perhaps Columbus, N. C., and possibly Clayton, Ga.

This is a matter of very considerable interest, because it appears that in this small area the total rainfall approaches that to be found in the extreme northwest of the United States. The largest rainfall in the northwest is at Neah Bay, Wash.; average for eight years, 108 inches; greatest, 136 inches in 1879. The high rainfall in southwestern North Carolina is undoubtedly due to the passage of storms over the extreme southern end of the Appalachian Range. The Gulf storms, and storms that travel along our southern latitudes, are usually heavily charged with rain. When these come in contact with the mountains they discharge more of this rain than elsewhere, and the amount discharged will be greatest for the southern extremity of the range; hence, we find in this very limited region a very high rainfall.

3. *Topography and its effects on rainfall.*—From the great plains westward the lines of equal rainfall are, approximately, north and south. In the Southern States, east of Texas, they are approximately parallel to the Gulf coast. In the Eastern States they are approximately parallel to the Atlantic coast. In the Lake region, while they approach parallelism to the parallels of latitude, yet there are some variations, evidently due to the effects of these great bodies of fresh water and their temperature at different seasons of the year. In the vicinity of Cape Hatteras and on the Peninsula of Florida other influences come into play, modifying the direction of the lines of equal rainfall. Cape Hatteras is the point of highest rainfall along the Atlantic coast, due, undoubtedly, to the seasonal winds which pass at sea and reach, more or less, this prominent point.<sup>1</sup> On the Peninsula of Florida we approach the tropical region and approximate the laws of tropical rainfall. East of the ninety-fifth meridian the rainfall decreases as the latitude increases. West of that the general topography of the continent causes the lines to run north and south.

In general the rainfall decreases also with the elevation above sea level. This is very noticeable in passing along, for instance, the parallel of latitude 40°. The annual rainfall on the coast in New Jersey ranges from 40 to 50 inches. As we pass westward we come to the area where the rainfall is about 40 inches. This rainfall continues along the parallel until the vicinity of the Mississippi River is reached, when it decreases with the comparatively rapid ascent of the slope to the great

<sup>1</sup>See combined records of Cape Hatteras and Hatteras.

plains. By the time Kansas is reached the annual rainfall has fallen to 30 inches; in western Kansas it is only 20 inches, and in passing the boundary of western Kansas we pass the annual rainfall line of 15 inches. On the Pacific slope the phenomena are more complex, because of the prevailing winds and the more rapid ascent from sea level in the region of the Sierra Nevadas.

A very remarkable feature in the rainfall of the United States, appearing on most of the monthly maps, and distinctly on the annual map, is the way in which certain peaks and ranges of mountains are outlined by the mean rainfall. Taking first, the Sierra Nevadas, we find them distinctly outlined on the annual map from Pitt River at the north to Owens Lake at their southern end. It is quite remarkable that Mount Shasta, north of Pitt River, appears to have very little effect on the rainfall. This is not due to the absence of stations, because the stations are as thickly distributed in the vicinity of Mount Shasta as elsewhere in this part of the territory of the United States. In the Sierras themselves the greatest effect is observed to the northeast of Sacramento, at about the point where the Central Pacific Railroad crosses the range. In January, for instance, in this vicinity the rainfall amounts to 10 inches, and it decreases rapidly as one proceeds eastward, and almost as rapidly westward to the valley of the Sacramento River. In February the rainfall here is from 8 to 9 inches, being decidedly larger than that on either side. In April it has fallen to 5 inches, and in May to 2 inches. It still, however, keeps a distinctly higher rainfall than that which appears to some distance east and west. From June until September this effect almost disappears, but reappears with the beginning of the rainy season in October, at which time these mountains are slightly outlined. In November the rainfall in this region is 6 inches, and in December 6 to 7 inches. In winter there are 28 inches of precipitation on this mountain range, nine times as much as falls at a distance of not over 50 miles to the eastward, and three times as much as falls at a distance not more than 75 miles to the westward. In spring it is about 15 inches. For the year the rainfall on the range at this point is about ten times as much as in the western part of Nevada, just to the east of the mountains, and between two and three times as much as that found in the Sacramento Valley.

Very much the same phenomenon, but not so well marked, is to be found in the Cascades at The Dalles, where the Columbia River breaks through, and it is undoubtedly to this surplus of rain, relatively, that these mountains owe their name. In spring this area is distinctly outlined with a rainfall of 15 inches, while in the Willamette Valley it is only about 10 inches, and at the great bend of the Columbia only about 5 inches. In summer, which is the dry season in this area, the effect is nearly effaced. In autumn the mountains are very distinctly outlined, and the rainfall in this particular district is 20 inches, while along the Willamette Valley it is only 10 inches, and immediately to the east of the mountains it is only 5 inches. In winter the whole range is outlined by the lines of greater rainfall. The greatest rainfall observed is 38 inches or more. The rainfall in the Willamette Valley is only from 18 to 24 inches, and just to the east of the mountains, but a few miles distant from this region, it is only 15 inches. On the annual map the lines define the range for a large part of its length, extending from opposite Seattle, Wash., to eastward of Salem, Oreg., a distance about 175 miles.

Another series of facts of very great interest can be read from the maps in the consideration of the relations of rainfall to the leeward and windward sides of the ranges. This is by far the best marked on the Pacific coast, where the prevailing winds are distinctly from the west and reach the coast laden with moisture from the warm ocean. To the westward, for instance, of the Sierra Nevadas, on the annual map there is a rainfall of from 20 to 40 inches. Immediately to the eastward of this series of mountains the annual rainfall is only from 2 to 6 inches. Much the same is true of the Cascade Range, and even the Coast Range has a very marked influence on the rainfall. The annual line, for instance, of 40 inches of rainfall passes down the coast from Vancouver Island almost parallel to and westward of the Coast Range, although for most of this distance these mountains are quite low. The line of 40 inches goes into the interior only up the Columbia River and

along the Cascade Range. A similar parallelism is found, but not so marked, along the Coast Range in California, the most marked effect there being over the high Sierra Nevadas which lie to the eastward, and in the mountains lying to the eastward of Los Angeles and San Diego in southern California. On the peaks of the latter mountains 30 inches of rain fall during the year. Along the coast there are only 10 or 15 inches, and by passing a few miles eastward to the Colorado and the Mohave Desert we reach the point where the rainfall is so small as to be almost *nil*. To the eastward of where 30 inches of rain falls every year is to be found the area where the rainfall is least for any place in the United States, namely, the Mohave Desert. At one station in this area the average annual rainfall is only 2.1 inches.

Another feature of great interest, which can be observed to a marked degree on the annual rainfall map, to a less degree on the maps for the seasons, and can even be detected on many of the monthly maps, is the existence of islands of greater rainfall in the areas of least rainfall, as already described. Some of these islands have already been mentioned in connection with the least rainfall. They occur in considerable numbers in Arizona. For instance, on the reservation of the Apaches, near the headwaters of the Gila River, is an area where over 20 inches of rainfall have been observed. This area extends eastward to the edge of New Mexico. The rainfall decreases from this center in every direction, and soon falls to 15 inches, and even to 12 inches, annually. Just to the south of this and to the northeast of Tucson is an area where the rainfall is above 15 inches, about twice as much as that in the surrounding district. Also, to the northwest of the island first described, in the vicinity of Prescott, and in the region where originate many of the tributaries of the Gila and Colorado rivers, is an area of rainfall of 15 inches and upward. In New Mexico there are several such islands. One is in the vicinity of Fort Stanton, among the mountains to the east of the Rio Grande. Another is to be found in the high mountains from Santa Fe and Las Vegas northward, where the rainfall surpasses by 5 or 10 inches that in the area immediately around it. Several such areas may be found also in Colorado, usually in the vicinity of high mountains, most of them being to the southward and westward of Denver, one including Pikes Peak. The rainfall in this small district is 30 inches and upward, and at a very short distance in any direction it decreases to 15 inches. Another island of similar sort is to be found over the Black Hills.

A common feature of these islands is that they occur at the sources of many of the great rivers of the west. It has already been mentioned that the branches of the Gila River originate in the islands which are found in Arizona. From the island which is found in northern New Mexico and southern Colorado comes the Rio Grande, and in the latter area the snowfall in some winters is extremely heavy. Indeed, reports are occasionally made that the snow lies here from 15 to 20 feet, sometimes covering the small native houses.

In the islands of higher rainfall found in the vicinity of Denver originate branches of the Arkansas River, of the Platte branches, north and south, and of the Grand River, an affluent of the Colorado. In the island which is found about the Black Hills originate many of the branches of the Cheyenne River, running eastward, and of the Little Missouri River, running northward. An interesting island is to be found in northern Georgia, southeastern Tennessee, and southwestern North Carolina, and has already been discussed. In it originate many of the rivers which reach the south Atlantic or Gulf coasts.

A very remarkable fact, to which attention has apparently not before been called, is that, while most of the rivers in the United States originate either in areas of abundant lakes or of relatively high rainfall, some of the principal rivers of Texas take their source at the margin of an area of especially low rainfall. The area in question is in western Texas and southeastern New Mexico, and on the edge of it are to be found the sources of the Brazos and of the Colorado rivers, the longest rivers which lie entirely within Texas. It would be interesting to learn why two rivers of this size should find their origin in a territory especially marked by its absence of heavy rainfall. The rainfall in this territory is less than 20 inches, and for a considerable area it is less than 10 inches per year.

Another curious fact which may be mentioned in connection with the general rainfall of the United States is that, generally, the great swampy areas occur in regions of highest rainfall. This is true, for instance, of the everglades of Florida, where the rainfall is from 50 to 70 inches per year. It is also true of the great swampy district lying on the coast of North Carolina, where the rainfall is 60 inches per year, and upward; also, of the swampy district about the mouth of the Mississippi River; but is not so true of the celebrated swampy district lying to the west of the Mississippi along the Gulf coast. About the mouth of the Mississippi River the rainfall is above 60 inches, while for the celebrated swampy district to the westward (so wet that one can in some cases stand on a meadowland and shake it for some distance around by the motion of his body) the rainfall is less than 60 inches, though it is above 50 inches. This wet area has probably been but recently recovered from the Gulf by deposits brought down by the great river.

It is interesting to notice the effects of the Great Lakes on the rainfall visible on most of the maps. In general, it will be found that the rainfall is greater on the east shore of Lake Michigan than on the west shore. It is to be noted that the prevailing winds here reach the Lake from the west. Either they gather up considerable moisture from the Lakes which is deposited on the east shore, or, what is more probable, the temperature of the Lake is such as to chill the air and cause it to deposit more of its moisture on the east shore than on the west. Much the same is true of the east shores of Lake Erie and Lake Ontario, areas which are small in both cases, because the lakes themselves lie east and west. There is, however, a distinct increase of rainfall along the southeastern coast of Lake Erie and to the east of Lake Ontario. These features can be traced on the monthly maps, but more perfectly on the seasonal ones. The effect seems to be somewhat more marked in the cold seasons than in the warm, and it is a noteworthy fact that the areas of deep snows in Michigan and New York are found to be on the same line. The area of deep snows for southern Michigan is from the middle of the west coast, in the vicinity of Manistee, nearly straight across the peninsula; the area of deep snowfall in New York is to the eastward of Lake Ontario, and, to some degree, to the southward, in the immediate vicinity of the lake. It should also be noted that the area for deepest snow in the United States not mountainous is along the south shore of Lake Superior, from Marquette eastward. This would quite agree with the suggested influence of the Lakes, in that the air passing over Lake Superior comes largely from the north-west, and by the time it reaches the coast in question has already received a surcharge of vapor chilled by the surface of this lake.

4. *Snow*.—In general, on the maps of precipitation the snow is not distinguished from the rain. It is usual to reduce the snowfall to rainfall and enter both in the record. This is, of course, only for snow in the vicinity of the stations, the depth remaining on mountain peaks not being considered. From these observations some conclusions can be drawn of the way in which the snow layer extends itself over the country, from the first to the last snowfall. These results are, from the nature of the observations, not so exact as those which have been utilized on the rainfall maps; but they are of some value, and conclusions to be drawn from them can be obtained by consulting the eight maps on Sheet xviii, which show the depth of snowfall for each month. The zero line is the southernmost limit of snowfall during the period under observation (five to twenty years).

An important feature of snowfall is that of the snows which lie permanently, or through a large part of the seasons, on mountain tops. It is from this snow that the western rivers take their source, and the waters from its melting are, to a great extent, those used in irrigation. Such is the source of the water of the Columbia River, for the most part north of our boundary; also of the Sacramento and San Joaquin during the early part of the season, and to some extent, during the whole year. In central and western Colorado are a number of mountains on which the snow lies for the most of the year, in some cases for the entire year, and from these are derived the waters of the highest streams of the rivers which take their source in this vicinity. The waters of Salt Lake Basin are to some extent furnished from the same source. The Rio Grande River rises in

the melted snows in central and southern Colorado. In many places this snow remains during the year. As the Rio Grande receives very few affluents of any size the height of its water depends on the melting of this snow. The same is also true of the Arkansas, the Platte, the Cheyenne, and the upper Mississippi rivers. It is to the existence of this snow that is due a fairly constant current of water in the arid and semi-arid regions permitting irrigation. The snows are consequently of the highest importance to the western region, and a more detailed investigation of them, their depth, their amount, their distribution, and their disappearance is very much to be desired.

5. *Distribution by States.*—It is interesting in this connection to observe the distribution of rainfall by political divisions. This does not necessarily have the significance that might be attributed to it, however. It does not follow that because a State has a low rainfall that it is unsuited for agricultural operations, nor does it follow that because a State has a heavy rainfall, the same is true. Suitability for agricultural operations depends on the distribution of rainfall during the year and on its character, whether, for instance, it comes in very heavy falls for a few days, or is scattered in light rainfalls over many days. It also depends upon the capacity for irrigation on the one hand, and for draining on the other. With these preliminary statements it is interesting to note the classification of the rainfall according to the amounts in the different political divisions.

There is but one State (see Table II) that has a less average annual rainfall than 10 inches. This is the State of Nevada. In this State the annual rainfall is only 7.6 inches.

The States in which the annual rainfall is between 10 and 20 inches are the following, in the order of the amount of rainfall: Utah has 10.6 inches on the average; Arizona, 10.9 inches; Wyoming, 11.6 inches; New Mexico, 12.7 inches; Montana, 14.0 inches; Colorado, 14.8 inches; and Idaho and North Dakota, each, 17.1 inches.

Next in interest are the States of greatest annual rainfall. These, in order, are: Florida, 54.9 inches; Louisiana, 53.9 inches; North Carolina, 53.7 inches; Alabama, 53.6 inches; Mississippi, 53.0 inches; Georgia, 51.4 inches; Tennessee, 50.7 inches; and Arkansas, 50.6 inches. These are the only States in which the annual rainfall is above 50 inches. It is a curious fact that in Oregon and Washington, in which are found the stations of highest rainfall in the United States, the average annual rainfall is 44.0 and 39.8 inches, respectively. This is, of course, due to the fact that this heaviest rainfall is a purely seasonal one on the Pacific coast, and also to the fact that this rainfall is heaviest along a narrow strip in the immediate proximity to the coast. A full half of these two States lies in the region of little rainfall to the leeward of the Cascade Range of mountains.

Another feature of interest with reference to the political divisions is that of the relative variations of seasonal rainfall during the seasons (Table II). By relative variations of seasonal rainfall is meant the answer to the question, is the rainfall evenly distributed through the year, or is it much greater at one season of the year than at another? Taking first the States in which the rainfall is most evenly distributed, we find that in Massachusetts the season of maximum rainfall is only .05 inch greater than the season of minimum rainfall. In Connecticut it is .13 inch; in Delaware, .15 inch; in Rhode Island, .16 inch; in Maine, .17 inch; in New Jersey, .20 inch; in Indiana, .21 inch; in New Hampshire, .24 inch; and in Illinois, .45 inch. On the other hand there are several States in which the difference in rainfall in different seasons is very remarkable, as, for instance, in California the rainfall is forty times as great in the maximum season as in the minimum season. In Oregon it is 7.8 times as great; in Nebraska, five times; in North Dakota, 4.7 times; in Washington, 4.3 times; in New Mexico, 4.2 times; and in Nevada, four times as great.

The distribution by States and seasons of this variation is shown on Map 3 of Sheet xxii. From Texas to Maine and from Michigan to Georgia the variation is small—never that of 1 to 2. In the other States the variation is more than 1 to 2. In the States of Idaho, Wyoming, and Colorado the rainiest season is the spring. In the upper Mississippi and Missouri valleys, from Kansas north and Wisconsin west, the rainiest season is the summer. This is also true of New Mexico and Arizona. Florida has its heaviest rainfall in the autumn, and the remaining States in

the West, with Utah, in the winter. A more detailed discussion of this feature in Part II will show that in the northern region of summer rains the maximum is in early summer, in the southern in late summer.

Another interesting point is the average rainfall for the entire United States. The average of all stations, by States, gives for spring, 9.2 inches; for summer, 10.3 inches; for autumn, 8.3 inches; and for winter, 8.6 inches, and a total for the year of about 36 inches. It appears that the rainfall over the United States generally is quite evenly distributed through the year, varying in total amount for the seasons from 10.3 for summer to 8.3 for autumn. The spring and summer rainfalls are the highest; other things being equal the rainfalls of spring and, next to that, of summer are the most useful for agricultural operations.

With the depth given it is not difficult to get the average total rainfall for the entire United States (excluding Alaska, where we have not sufficient information). For this purpose we may take the average for each State and multiply it by the area of the State, including water surfaces (Table II). Adding these together we get 1,407 cubic miles as the average annual total of water which descends as rain or snow in the United States. The figures for the areas are taken from the census for 1890. The annual depth of rainfall which this gives is 29 inches, or less than that given by the other method. This is to be expected, as the other method gave equal weight to each political division, and these divisions are generally smaller in the regions of greater rainfall.

To get some conception of this enormous mass of water we may compare it with the contents of the Great Lakes, and an approximate comparison is near enough. Lake Ontario is about 200 miles long and 70 broad, and its average depth is about 40 fathoms. It, therefore, contains about 636 cubic miles of water. The annual rainfall would fill it two times and leave something over for a third time. Lake Michigan is about 310 by 70 miles and has an average depth of about 50 fathoms, and consequently contains about 1,233 cubic miles of water. The average annual rainfall would fill Lake Michigan and leave 174 cubic miles over. Four years of rainfall would probably be enough to fill all the Great Lakes.

The amount of mechanical work which the raising of this involves is enormous and the ordinary conception of it is quite inadequate. Some idea of it can be reached as follows: One inch of rain per acre makes 22,624 gallons, which equals 226,613 pounds. On a square mile the inch of water would weigh 72,516.4 tons (of 2,000 pounds each). A cubic mile of water would be this weight  $\times 5,280 \times 12 = 4,593,639,104$  tons, or if the average temperature is a little above  $39^{\circ}$  F.,  $= 4,500,000,000$  tons. The total weight of our rainfall (excluding Alaska) would be this multiplied by 14.07. This gives the enormous quantity of 6,332,000,000,000 tons. Let us take as a unit of handy measurement the weight of one of the lakes, say Ontario—636 cubic miles. A cubic mile of water weighs 4,500,000,000 tons. Hence, Ontario weighs 2,862,000,000,000 tons. Our average rainfall, weighing 6,332,000,000,000 tons, is therefore 2.2 Ontarios. The rain descends from clouds which average half a mile in height, and in raising the water to this height before falling, nature must perform the work of lifting 3,166,000,000,000 tons one mile per year, or 1.1 Ontarios. This, in work per day, is nearly 9,000,000,000 tons lifted one mile, and reduces to something like a lift of 100,000 tons per second. A ton lifted one mile per second is 19,200 horse power. The work done by nature, therefore, in raising the rainfall to the clouds is equivalent to  $100,000 \times 19,200$  horse power, or 1,920,000,000 continuous horse power, or the work of 5,000,000,000 horses working ten hours a day—perhaps a thousand times as many horses as there are in the United States.

6. *Disposal of the rainfall.*—The rain which falls over an area can be disposed of in four different ways, and each of these ways plays its part. It may, in the first place, flow off from the surface of the ground to the smaller streamlets, thence to the streams and rivers. In the second place it may pass into the ground, percolate through the soil, and a quantity of it eventually reach the streams by way of the springs. Third, a considerable portion of it will be disposed of by direct evaporation, and this evaporation may occur on the surface of the ground, or of snow, or on other

objects which have been wetted by the rainfall or loaded with snow, or from the surface of the streams and other bodies of waters themselves. Fourth, a small part is disposed of by being utilized in organic changes in animals and plants, or chemical changes taking place in the soils and rocks. These different methods can not be entirely separated from each other, and all result in final evaporation as the source of rainfall. The part of the rain, for instance, that reaches the streams, is later evaporated in the streams or in the ocean; a part of that which percolates through the soil is utilized by vegetation, but a considerable part reaches the streams eventually. We might endeavor to get the relative proportions of the different methods of disposal, but the data are insufficient for exact statements, especially so for evaporation. Observations of evaporation have been taken at but few points in the United States, and where taken they are generally under conditions not reproduced in nature, so that even the data which we have derived are not suitable for use. The only method of disposal which we can treat with any approximation to correctness is that of the run-off, and even this but approximately. For the purpose of this approximation I have made use of a map of the run-off, which, at the time of this writing, is still in manuscript. It was prepared by Messrs. Gannett and Newell, of the U. S. Geological Survey, who kindly furnished me with an early copy, and is to be considered as only a preliminary survey of this field. By means of this map and of the map of annual rainfall, we can estimate for areas as large as States the proportion of the rainfall which is carried off by the streams, and draw some interesting conclusions.

For the area of the United States east of the ninety-fifth meridian the run-off is from 35 to 50 per cent of the total rainfall. It appears to be largest in the vicinity of the Great Lakes, and diminishes from this region slowly to south and east, and rapidly toward the west. In the Lower Peninsula of Michigan, for instance, the run-off is 50 per cent of the total rainfall. Along the Gulf coast it appears to be only from 30 to 40 per cent, and along the Atlantic coast it probably varies from 30 to about 50 per cent. In general, for the interior States east of the ninety-fifth meridian the run-off is between 40 and 50 per cent of the total rainfall.

As soon as we cross the ninety-fifth meridian westward we find a very sharp fall in the percentage of run-off to the total rainfall. For the band extending north and south between the ninety-fifth and one hundred and fifth meridians this percentage varies from 10 to 25 per cent, and over Iowa is about 33 per cent. The percentage is highest at the northern end of the band indicated, and lowest at the southern end. Going still farther westward we come to another very marked area, that of the Continental Divide; here the percentage of run-off suddenly increases, reaching the highest figure to be found in the United States. From Montana to Colorado it varies from 60 to 70 per cent of the total rainfall. In New Mexico it falls to about 33 per cent. This is evidently on account of the easy flow of water from the mountain ranges in the area in question. West of the Divide the run-off is again small, being only 15 or 20 per cent in Arizona and Nevada, about 30 per cent in Idaho, and nearly 50 per cent in Utah. Utah, it seems from its topography, partakes of the character of the band lying just to the east of it. Along the Pacific coast the run-off is about 25 per cent in Oregon, 30 per cent in Washington, and between 45 and 50 per cent in California.

In general, we may say that the run-off on the more level areas of the United States is less than 50 per cent, and on the great plains may fall as low as 10 per cent. In the mountain regions it may rise to as high as 70 per cent. In the relatively dry areas, or the areas of distinctly dry seasons, the percentage is very much reduced.

The disposal of rainfall by direct evaporation, by percolation, and by utilization in chemical changes can not be estimated with sufficient approximation of accuracy to be useful.

7. *Variations in the annual rainfall.*—A question of great interest in connection with the rainfall of the United States is whether it is increasing or decreasing, or whether the areas of highest or lowest rainfall are extending their boundaries. The latter question has been very much discussed, and many varying views have been expressed upon it. In order to state it here with as much accuracy as the data will permit, the annual rainfall reduced for the series of 5-year means has been

used. These means were entered on a succession of maps, five years apart in time, and on these maps was drawn the line of 40 inches of annual rainfall. This line crosses the States from the north-east to Texas, passes through the region where the rainfall has been observed with the most care and for the longest time, and is, therefore, most suitable for this use. The question would be, as we draw this line for each 5-year mean, does it change its position in any regular and systematic way? Is it found further east or further west at the end of these periods than at the beginning; or further north or further south?

Map 4 of Sheet xxii will show how this question is to be answered. On it have been placed the different lines for 40 inches of annual rainfall, one upon another, for six 5-year periods, and if there is any regular or systematic change in the rainfall within that period, it should appear plainly on this map. An examination of the details of these lines shows that while they are subject to limited fluctuations, while the rainfall of 40 inches may spread out in one case to a point far northward or westward of that which it occupied in another case, yet on the whole there are no uniform or systematic fluctuations. The line of equal rainfall for 1861-'65 occupies nearly the same position as the line for 1886-'90. The variations are sometimes extensive, but there is no systematic progress in them. It would appear, therefore, with the data at command, that there is not sufficient evidence of systematic fluctuations of the rainfall. This is of especial interest, for it has been claimed that there are evidences that the lines of equal rainfall are gradually progressing westward over the plains with the advance of civilization over that area. This is not supported by the facts represented on this map.

8. *Daily rainfall.*—The statistics, for twelve selected stations, of the rainfall for each day of the year are given in Table III. The feature employed in drawing up the table is the percentage of the days on which rain has fallen on the date in question. Thus, if the number given is 33 it means that out of the whole number of recurrences of the date rain fell in 33 out of a 100, or about once in each three. An examination of the table shows a rough periodicity of four or five days. The number of years is too few to determine if this is an actual period of rather vague character or if the phenomenon is so lawless, from the standpoint of recurrence in parts of a year, that the number of years of observations are not enough to eliminate the irregularities. In favor of the first view is the fact, to be seen by a careful inspection of the table, that the maxima in the upper Mississippi Valley often precede by a day or two those on the Atlantic coast; also by the fact that these waves do not disappear when several stations on about the same meridian are combined, making an aggregate of about a hundred years of observations. There is evidence of a vague character that waves of warmer mean temperature sweep over the country in somewhat similar periods.

9. *Hourly rainfall.*—The automatic record of rainfall now makes it possible to study its distribution through the hours of the day. The phenomenon proves to be a somewhat lawless one and only those stations are taken where the observations have continued for a series of years. This is the case at Blue Hill Observatory, near Boston, Mass. (six years), at Central Park Observatory, New York, N. Y. (twenty-three years), and Washington, D. C. (sixteen years). The records have been combined and the results are given in Table IV by months and seasons.

The instruments used at these stations are different. At the first and second the record is made by the weight of the water, at the third by the height of water by use of a float.

The self-recording rain and snow gauge used at Blue Hill Observatory was constructed by Richard Bros., of Paris, after the design of Mr. A. L. Rotch, the proprietor. The receiver in this gauge rests upon a platform balance, and when rain falls its weight causes the balance to record the amount and time of the rain upon a revolving drum. To adapt it to snow another and deeper receiver is used with a shield within to prevent clogging by sleet.

The collecting mechanism of the Draper self-recording rain and snow gauge in use at the Central Park (New York) Observatory consists of the usual Smithsonian circular receiver, 8 inches in diameter and funnel-shaped at the bottom. A brass gravity bucket of a triangular prismatic shape



receives the water collected by the gauge and actuates the recording pen. The funnel-shaped receiver is artificially warmed so that snow or sleet is melted as fast as collected. A full description of Dr. Draper's gauge may be found in any of his published reports.

The Eccard self-recording rain and snow gauge, from which the record for Washington is taken, is figured and described on page 32, Report of Chief of Weather Bureau, 1891-'92. It consists essentially of a receiver 12 inches in diameter with an enlarged bowl underneath, a measuring cylinder containing a float, the motion of which is communicated to a recording pencil which traces the record on a revolving drum. The bowl of this gauge is also artificially warmed in order to melt snow and sleet. For light snows and light drizzling rains, gauges of this type, that is, in which the receiver is artificially warmed, are objectionable on account of the great tendency of the rain or snow to evaporate before it reaches the recording vessel.

The hourly amounts of precipitation at Blue Hill, as published in the annual volumes, have had a correction applied to them to reduce them to standard gauge measurements. No such correction has been applied to the Washington records, nor, so far as known, to the Central Park records.

The data obtained by these instruments are of two kinds, viz, the number of times of rain in each hour and the amount of rain for each hour. These are given separately in Table IV. An inspection of the numbers of the table show that irregularities still exist. The seasonal means for all have, therefore, been combined in order to find what suggestion of distribution through the hours exists in the results. In order to give due weight to the number of years of observations the longest series (twenty-three years) was multiplied by three, the next (sixteen years) by two, the last by one, and the sums were divided by six.

The results for frequency are expressed as the number of times per month on which rain would fall in that hour. Inspecting the combined results we find that in winter precipitation is most frequent in the forenoon, in summer in the afternoon or evening. In both spring and summer there is a minimum of rainfall about noon and midnight. It is especially marked in summer, and occurs in the hour ending at noon. In spring and autumn the rain is most frequent in the hours between midnight and sunrise.

The quantity part of the table gives, in fractions of an inch, the average amount which falls at each hour of the day. The table of combined results shows that these quantities run with fair uniformity through the hours with only two noteworthy exceptions. In summer the quantities in the afternoon and evening hours (from 3 p. m. to 10 p. m.) are about twice what they are in the other hours. This maximum of amounts corresponds with the maximum of times in this season. In winter there is also a maximum at about noon, a little belated on the time of maximum frequency. It is noteworthy that the minimum of amounts at the noon hours is not so well marked as the minimum of frequency (in spring and summer), showing that when it does rain at these hours, it is likely to rain harder.

If the amounts in the table are divided by the corresponding frequencies, we obtain what is called the density for each hour. The series of observations is hardly long enough to make these results instructive.

## II.—RELATIVE AMOUNTS OF PRECIPITATION.

In the discussion of the relative amounts of precipitation care has been taken to reduce them to equal months so that they will be strictly comparable. This was done by adding the necessary proportions to February and by subtracting the necessary proportion from the longest months. The results are given in Table V by percentages, so that a comparison can be made with ease.

10. *Curves.*—The curves for the various months show that certain types of the distribution of the rainfall during the year prevail in certain parts of the United States. These may be reduced to three distinct forms, with very many intermediate forms. Of these the first form is that of New York, N. Y., where the rainfall is 45.2 inches (see Fig. 1). There is here a slight maximum in Jan-

uary and in March, and a well-marked maximum in August. The best marked minimum occurs in May, and a secondary minimum in December. There is here comparatively little variation during the different months, the lowest minimum being  $6\frac{1}{2}$  per cent of the total rainfall (May), and the greatest maximum being  $10\frac{1}{2}$  per cent of the total rainfall (August).

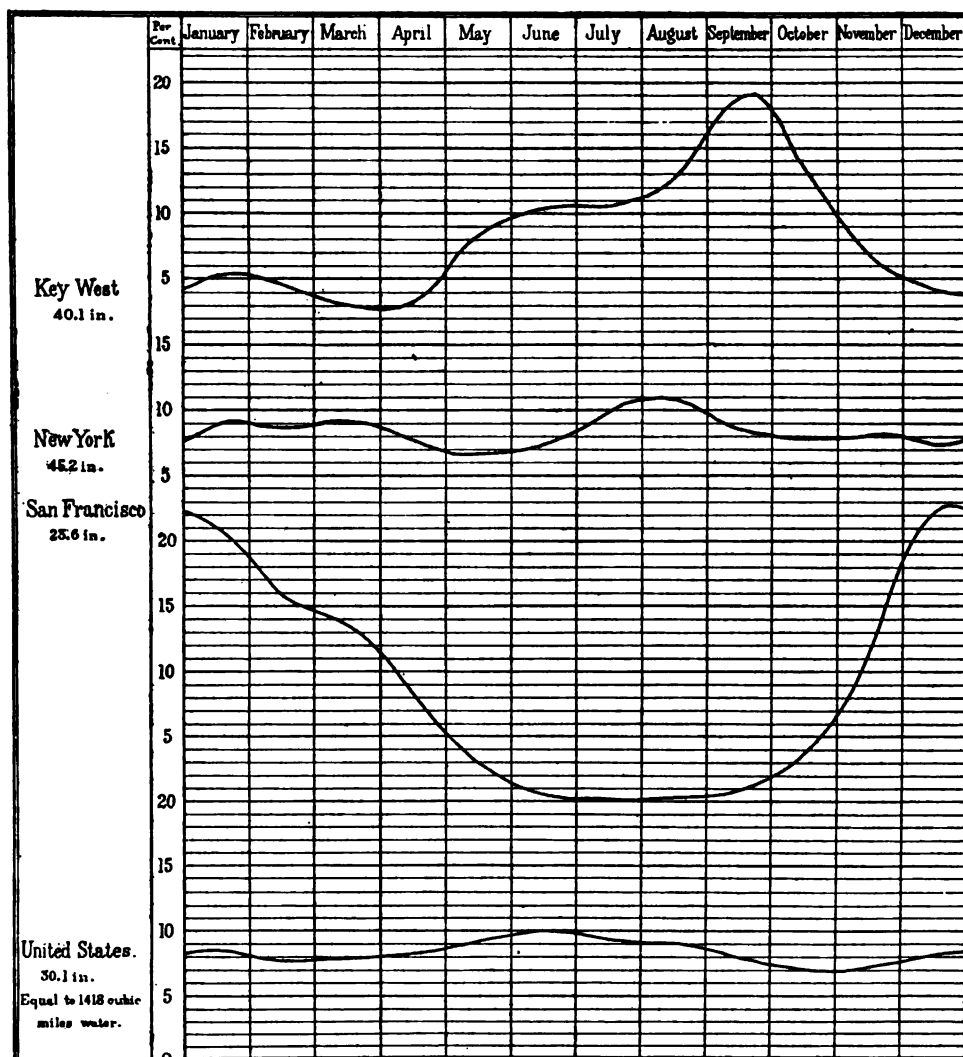


Fig. 1.

The second type is to be found at Key West, Fla., and this is distinctly a type of tropical rainfall. The principal maximum occurs in September, in which month 19 per cent of the rainfall for the year descends. A second maximum, much less in magnitude, can be found in January, when 5 per cent of the total annual rainfall descends. The principal minimum is in the latter part of March and the beginning of April, when the rainfall descends to only 3 per cent. The second minimum is in December, when the rainfall descends to 4 per cent.

The third well-marked type is illustrated by the rainfall at San Francisco, Cal., where the total for the year is 23.6 inches. There is here one maximum and one minimum only, the former occurring in December, the latter in July and August. In December the maximum is 22 per cent, that per

cent of the rainfall descending in a single month. In the dry season, in July and August, the rainfall is reduced to practically zero. For the United States, as a whole, the curve shows great uniformity for the different months, varying only between 7 per cent for the lowest minimum and 10 per cent for the highest maximum. The maximum falls in June, the minimum in October. The uniformity of the distribution of rainfall through the months is striking.

11. *Maximum monthly rainfall.*—It is of special interest to see in what way the rainfall is distributed geographically over the United States with reference to the seasons. A study has therefore been made of the regions over which there is a maximum rainfall for each month of the year. These regions are ill-defined at their margins, one type of distribution passing gradually into another. Moreover, in most stations there is more than one maximum of rainfall during the year. To represent the maximum, a line is drawn centrally through the area in which a maximum rainfall occurs for any month (see Sheet xix). The proper way to read the maps is to consider the maximum as best marked along the line there given, and to gradually fade away as the distance from this line is increased. Where two lines cross each other in successive months, as in May and June, on the first two maps, it simply means that the maximum of rainfall in question comes near the end of May or early in June. Where lines cross the same place for months separated by intervals, it means that there are two or more maxima of rainfall for that particular place.

Taking now these regions by the month, we find on the first map a maximum of rainfall in March, extending along the Atlantic and Gulf coasts from New England to Texas, and also extending down into the Peninsula of Florida. It spreads well into the interior and covers the region in the vicinity of the lower Lakes. In April it has passed westward and occupies but a little territory in Arkansas and Louisiana. By May this maximum has passed farther westward and occupies the central plains, the crest running in a curve from the vicinity of Davenport, Iowa, around through the extreme north of Texas, and northward in the vicinity of Cheyenne, Wyo.

These rainfalls are well distributed for greatest usefulness to crops. Rains, other things being equal, are the most useful in the spring. Whether, however, they are actually of the greatest use to the crops depends among other things on the character of the rainfall, a point to be discussed hereafter. If the rain comes gently and is distributed throughout the days this rainfall may be beneficial. If it comes in sudden heavy showers which wash away the soil and wash the seed out of the ground, it is injurious.

The regions of summer rainfall are especially interesting. There is an enormous territory in the United States over which a maximum rainfall occurs in June. The line which represents the crest of this wave begins in western Washington and extends to the southern part of the Peninsula of Florida. There is also a distinct extension of this area eastward in the vicinity of the upper Lakes. This area of higher rainfall extends from this line both toward the east and toward the west in July, occupying the remainder of the territory of the United States east of the Mississippi River, and also a territory in the southwestern plains, through Colorado, New Mexico, and Arizona. It has extended still farther from the main axis in June. It is found then along the Atlantic coast, also along a part of the Gulf coast. It is also found in the western region before mentioned, only somewhat farther south, occupying northern Texas, New Mexico, and Arizona.

The regions of maximum rainfall in autumn are not of so much interest, except in the extreme southeast, where there is a marked maximum about the Peninsula of Florida in September. In September also there is a secondary maximum in the region of the upper Lakes, a part of the upper Mississippi Valley, and along the Texan Gulf coast from Galveston westward. In October the maximum on the upper Lakes has extended to the lower, and in November this maximum has extended to the coast of New England, and to an area through the central States, reaching from Ohio to Texas.

The regions of maximum rainfall in winter are most interesting on the Pacific coast. Here the maximum rainfall occurs in December, and this area of maximum occupies not only the entire

coast, but a region in the interior which generally extends to the Great Divide. Toward the south there is a secondary maximum in February, which is the only maximum in the eastern part of this area, and in New Mexico. In January there is a region of maximum precipitation extending from southern Iowa to Lake Huron, and another much more extensive region extending along the Atlantic and Gulf coast to the Peninsula of Florida. These two waves of higher rainfall for January meet in February along a line which lies approximately half way between them.

The most interesting of the regions of monthly maximum rainfall for the United States are those of June, extending over a large number of States; those in September which are so well marked in Florida, and those in December and February which are so well marked on the Pacific coast and in the southwestern area. The other maxima which have been mentioned are generally of a secondary character, but when they occur in critical seasons their very existence is a matter of interest and importance.

12. *Rainy seasons.*—(Sheet xxi.) The occurrence of these maxima at the different seasons of the year suggests a more detailed study of well-marked rainy seasons throughout the United States. The first one to be taken up is one to which attention apparently has not been previously called, namely, a rainfall season in May, June, and July, which has its maximum in the vicinity of Fort Buford, N. Dak., near the boundary line between the Dominion and the United States, and on the great plains. During May, June, and July, fully 50 per cent of the rainfall of the entire year descends in that particular area. This is a good season for heavy rainfall in these latitudes for agricultural operations, and we have here, therefore, a feature which commends the northern plains. A line has also been drawn to show the area in which 45 per cent of the entire rainfall of the year descends in the same months. It includes a much more extensive area, embracing South Dakota, the most of North Dakota, Nebraska, and a large part of Kansas and Montana. Over this area it seems that 45 per cent, or more, of the annual rainfall descends in the late spring and early summer months. The line inclosing the area where over 40 per cent of the rain falls in these three months is still more extensive, its extension eastward being especially marked. The line including the area where over 30 per cent of the rain falls in these three months covers nearly all of the northern and central parts of the western plains, and extends well into the upper Lake region, reaching as far eastward even as Pittsburg, in Pennsylvania.

The next distinct rainy season in the year is almost as little known as the one which has been already noted. It occurs in July and August and occupies a considerable part of Arizona, New Mexico, and some of western Texas. Its center in the United States is at El Paso, Tex., where 40 per cent of the rainfall of the year descends in these two months. The area over which 35 per cent, or more, falls includes the largest part of New Mexico and a considerable part of Arizona. That over which 30 per cent, or more, falls includes all of New Mexico, the most of Arizona, and the western angle of Texas. This rainfall season has been from time to time referred to, but its outlines have, it is believed, never before been distinctly marked out.

The next rainy season of sharply defined character in the United States is in the months of July, August, and September, and occupies the extreme southeast of the United States, culminating in the vicinity of Punta Rassa, in southern Florida. At this point more than 50 per cent of the rain for the year falls in these three months. Along the west coast of Florida generally, including the entire Peninsula of Florida, as well as southeastern Georgia, more than 35 per cent falls during these three months. The line inclosing the area for 30 per cent of the rainfall starts in at Pensacola on the Gulf, and passes northeastward, disappearing on the coast just south of Cape Hatteras. In this area the time of maxima varies somewhat with the place, points not far distant from each other having maxima in different months. For instance, at Titusville, Fla., the maximum occurs a little before the time of the rainy season above, namely, in June. This is the only station at which this occurs. At Jupiter, Fla., farther south, the maximum occurs in September; at Punta Rassa, Fla., it occurs in July; at Pensacola, Fla., in August.

The last rainy season of well-marked character that we find in the United States is that on the Pacific coast, for the months of December, January, and February. It culminates at Los Angeles, Cal., in February, with over 60 per cent of the rainfall confined to these three months. The line for 50 per cent, or more, enters the coast in about the middle of Oregon, then descends southward and a little eastward, leaving the boundary of the United States just to the east of Yuma, Ariz. The line for 30 per cent, or more, enters the northern boundary in western Montana and descends nearly southward, leaving the southern boundary not far east of the line previously mentioned. In this area the maximum usually occurs in December, but at some stations in the extreme south it is shifted to February.

13. *Minimum monthly rainfall.*—(Sheet xxi.) In the same way that the maximum rainfalls of the United States were considered we can consider the minima. Beginning with the spring minima we find that in March there is only one—on the lower part of the Peninsula of Florida. By April the area of minimum rainfall occupies the coast from Norfolk southward, and also the interior from Eastport, Me., to Little Rock, Ark. By May it has drifted on until it occupies the coast from Massachusetts to Norfolk, Va., and along the Gulf coast to New Orleans, La., and northward to Arkansas and Tennessee. The summer minima are found in June along the New England coast to Long Island. In July they are found in a larger area, extending over the Lower Peninsula of Michigan to central Texas. In August there is a series of minima along the Lakes, from Rochester to Cleveland, and an extensive area of minimum rainfall over the Western States, along the Pacific coast, and in the interior of Idaho. There is also in August an area of minimum through central Illinois. In September the minimum area extends from Rochester, N. Y., to Cairo, Ill., and from Portland, Me., to Long Island. In October the New England series of minima has passed southward and is now found in southern New York, eastern Pennsylvania, New Jersey, and Maryland. It is also found over the Southwestern States from Missouri southward, and from Georgia westward to Illinois, in the lower Mississippi Valley. In November the minima extend along the Atlantic coast from Delaware to Florida and cover a large area in the Northwest, from the Cascade Range eastward to the Missouri River, and southward to the northern boundary of New Mexico and Arizona. The winter series of minima is somewhat more complicated. The December series occupies the southern part of the Peninsula of Florida, the same area as the preceding series in New England, from Portland, Me., to New York, and also a band extending from Lake Ontario southwestward to northern Louisiana. In January this latter series has drifted westward, and is found best marked in a band extending from Saginaw Bay westward to San Diego, Cal., and extending northward from this line over Minnesota and the Dakotas. In February the minima occupy the whole eastern coast and the area of the lower Lakes. They are also found on the northern plains east of the Continental Divide, extending as far eastward as Minnesota and as far southward as Nebraska and northern Colorado. It is a noteworthy fact that the minimum rainfall area is more extensive in the winter than at any other season of the year.

14. *Probability of rain.*—By this is meant the probability that it will rain on any given day. The probability may be expressed in tenths. Thus, if the probability is 7, then the meaning is that there are 7 chances in 10, as shown by previous observations, that rain will fall on that day. It may also be expressed in hundredths (as is done on the maps herewith), in which case 70 would mean 70 chances in 100, or 7 in 10, as above.

A series of twelve folio charts giving the probability of rain for the United States was published in 1891 by the Signal Service, and later data would not materially change the results. Here will be given only the annual chart, somewhat generalized in order to make the map easily comprehensible, and maps of greatest and least probabilities for the year. The data used are those of columns 3 of Table V.

The probability of rain for any day in the year is given on Map 5 of Sheet xxii herewith. From this it appears that the probability of rain on any day of the year is greatest over the lower Lakes,

and decreases from there southwest to southwestern Arizona. In the first region it is a chance of 50 in 100, or 1 in 2, that it rains on any day of the year taken at random. In the southwest it is only 10 in 100, or 1 in 10. The probability on the great plains is two or three times as great, and at the mouth of the Mississippi four times as great as near Yuma, Ariz.

The greatest probability of rain is given on Map 6 with the month or season in which it occurs, and the probability. For about half of the United States (excluding Alaska) it is in winter; over about one-third in May or June; and over the most of the remainder from July to September.

Map 7 in a similar manner gives the least probability of rain, with the months. It passes through all the seasons, but the area of least probability in autumn is the most extensive of all, extending from Montana to Georgia and from Texas to Connecticut. The next is the summer area of the Pacific coast, where the probability of rain is from 0 to 20 only.

15. *Character of rainfall.*—It is a matter of interest to ascertain whether the rainfall at any particular place is due largely to small rains, or to great ones. If the former is the case it will generally be favorable to agricultural operations and not damaging to structures. If the latter is the case it is liable to be unfavorable to agricultural operations and otherwise damaging. In order to ascertain the character of the rainfall columns 6 to 13 of Table V have been prepared, giving the percentage of days on which there was no rainfall, those on which the rainfall was between a trace and 0.25 of an inch, 0.25 and 0.50 of an inch, 0.50 to 1 inch, 1 to 2 inches, 2 to 3 inches, 3 to 5 inches, and over 5 inches. These are all expressed in percentages of days on which such rain fell, and the months have been equalized so that the percentages show the relative times of rainfall, and also, with proper treatment, the relative quantity of rainfall of each kind. Examining this series we find four very distinct types. The types as described are not the extreme cases, but are those which are obtained by taking a number of the most marked cases (from 5 to 20, depending upon the extent of area covered by the type) and deducing the mean values from the table.

As in the case of hourly rainfalls, there are here two distinct features of interest to be considered, viz, the frequencies of these different rains and their quantities. The first should be an answer to the question: On how many days do the light rains, the medium rains, the heavy rains, etc., fall? The second should answer the question: How much of the total rainfall comes down in the light rains, the medium rains, the heavy rains, etc.?

Examining Table V, with reference to the first question, we find four distinct types of rainfall—as to the relative frequency of light and heavy rains.

The first type is that which is found on the lower Lakes, and which has its extreme at Oswego, in New York. Its especial characteristic is the relatively large number of days on which small rains fell. This number of days is often greater than those on which no rain fell. This is particularly the case with these rains in the winter, but it may extend in some cases through the year, and at Oswego it is found that this maximum appears clearly in the annual rainfall curve.

The second type is best illustrated in the extreme northwest, but it is more or less clearly seen over our northern latitudes generally, except on the great plains, where the rainfall gradually passes into the fourth type. In the Northeast there is a combination of type two with type one, the traces of the latter decreasing as the distance from the lower Lakes is increased. Type one is that of smallest rainfalls, type two of small rainfalls.

The third type belongs to the Southeast and is best marked at New Orleans, La. It is marked by a greater number of medium rainfalls, due to the fact that the rains in our southern latitudes are largely local rains—thunderstorms, showers, etc. The rain of our northern latitudes comes usually in connection with general storms; the rain of the southern latitudes with local storms. Medium rains of short duration are, therefore, more frequent in the Southern States.

The fourth type is that of little rain. It is found in the drier regions of the United States, and is best marked at Yuma, Ariz. There is little rain of any sort and this usually comes with small showers, but cloudbursts occasionally occur. The rains of this type are generally local.

The fourth type gives the least rainfall and the third the most. Less rain comes down in every type for moderate showers (0.75 inch) than for heavier or lighter rains, but this difference is most marked in the third type. The first type gets much more rain for very slight than for any other depth of rainfall, and this is also the case for the fourth type. The most of the rain descends in falls of less than 1 inch per day in the fourth type.

It would be interesting to decide how much rainfall in a single day is damaging and how much rainfall in a single day is beneficial. Undoubtedly the small rains, generally speaking, are beneficial, and the heavy rains damaging. Where the line should be drawn between these two would depend upon the character of the crops and on the season in which it fell, and on the character of the soil, whether easily washed off or held firmly in position and not yielding to wash; and on other things which could be easily stated.

### III.—SPECIAL FEATURES OF RAINFALLS.

16. *Heaviest rainfalls.*—A matter of interest, from agricultural and engineering points of view, is the occurrence of very heavy rainfalls, whether for a single day or for several successive days, and even for the month or for the year. These have been compiled and are presented in Table VI. To the question of the heaviest rainfall for one day during the year a little special study has been given in order to see its distribution. The heaviest rainfall recorded for a single day in the year was in the month of May at Boise City, Idaho. This was due to a local cloudburst, and doubtless there may be similar heavy rainfalls at remote and uninhabited places in the arid region or its vicinity which have not met with the proper record. It is to such cloudbursts that is due the sudden rise of the streams in the drier areas of the United States. Under such circumstances a stream bed, usually empty, is very rapidly filled, and the water is seen coming down from the slopes in the form of a wall which may be several feet high. This would occur, naturally, most often in the areas where the run-off has the largest percentage to the total rainfall. Leaving out these cases, which can not be studied because of the lack of data, and turning to the question of the more general heavy rainfalls, we find a marked and interesting distribution. While these rainfalls are generally unlooked-for storms, and sometimes partake of the nature of cloudbursts, yet they show a certain distribution with reference to latitude in the vicinity of the coast, which indicates that they are very often, at least, parts of generally heavy rains where the rainfall is particularly great. On Map 8, Sheet xxii, on which these have been platted for the entire year, we find that the area of heaviest rainfall in one day is about Pensacola, Fla., where over 10 inches have fallen in a single day; and about New London, Conn., where 11.8 inches descended in the same time. These are both coast stations. The line for 7.5 inches skirts the coast from Cape Cod, Mass., to Charleston, S. C., when it passes inland, reappearing on the Gulf coast beyond Galveston, Tex. Practically, therefore, the area in which a rainfall of 7.5 inches in a day is liable to occur is along the coast from Cape Cod, Mass., to Texas, and over the southern half of Georgia, Alabama, the most of Mississippi, but not including the Peninsula of Florida. At Jupiter, Fla., the heaviest rainfall so far recorded in a single day is only 4.3 inches.

The area over which the rainfall is not greater than 2.5 inches in a single day is, according to the observations in hand, along the Continental Divide, inclosing the Great Basin and northern Idaho, as well as some parts of New Mexico. It is divided in part by a strip of higher rainfall extending from Tucson and Prescott, in Arizona, northward to Denver, Colo. The line for 5 inches on the Pacific coast includes only an area in northern California, northern Nevada, southeastern Oregon, and southwestern Idaho, and in these places the rainfall is not much above 5 inches, except at Boise City, Idaho, which has already been mentioned.

It appears that extremely heavy rainfalls are by no means matters of a large annual rainfall. In the region of largest annual rainfall in the United States, in the extreme northwest, these heaviest daily rainfalls are unknown, as well as in the region of next highest annual rainfall,

namely, southern Florida. They occur along the coast warmed by the Gulf Stream, but do not occur on the Pacific coast. The eastern part of the plains shows a tendency toward such rainfalls, but the whole of the region of the Continental Divide, with the plains immediately east and west, is not subject to them.

17. *Consecutive days with and without rain.*—It is a matter of considerable interest to ascertain how many days may pass in the extreme with, or without, rain in any part of the United States. The data which are tabulated and mapped are for the year, and include for the most part only the time during which observations have been taken by the meteorological service of the United States, namely, about twenty years. Undoubtedly, with a longer series of observations, the numbers given on these maps and in the tables could be somewhat increased; but with twenty years' observations behind us some general conclusions of enough interest to justify them can be drawn.

In the first place, what is the greatest number of consecutive days with rain in the whole year which have occurred within the last twenty years? Reducing them to a map (No. 9 of Sheet xxii) we find they take on a systematic form, a form which is quite as regular as could be expected from the limited number of years of observation. There are two areas in the United States where 30, or more, days of rainfall have occurred in succession. One of them is in western Oregon, the other around Oswego, in New York. The one is close to the area of greatest rainfall in the United States, and the other is the center for the peculiar type of rainfall already referred to, where small rains continue so persistently throughout the entire year. There are two areas of minima of consecutive days with rain, the one a small one in the north, just south of Manitoba; the other a large one, including in a general way the arid area of the United States and some of the outlying regions. It lies in two distinct parts, and is the area to which the physician should send his patient if it is required that the patient should be where there is as little consecutive rain as possible. There is a larger area in central United States, inclosing almost the whole of the Mississippi Valley, with the Missouri, and also the Southern States generally, except Texas, where the number of consecutive days of rain is between 10 and 20.

It is interesting to note the influence of the lower Lakes on the number of consecutive days of rain. Twenty days, or over, have occurred from Lake Huron eastward, and the number of consecutive days is the greater, generally speaking, if the station is to the leeward of these great bodies of fresh water. In this case, too, the Alleghenies play some part, so that the eastern boundary for 20 consecutive days of rainfall, or more, extends from the west side of Lake Huron down to Charlotte, in North Carolina; thence northward and eastward along the crest of the Alleghenies.

Thus far the discussion has been on the number of consecutive days *with* rain. We come now to the number of consecutive days *without* rain, and here we find much more variation on the map. (See Map 10, Sheet xxii.) The greatest number of consecutive days without rain in the stations examined has been 167, and the station is Yuma, Ariz. The next one in order is Sacramento, Cal., where 160 days have passed without rain. At San Francisco, Cal., 142 days; at Los Angeles, Cal., 120; at San Diego, Cal., 136; and at Fort Wingate, in northwestern New Mexico, 124. These numbers are far larger than those which are found anywhere else on the map. In general, we may say that in the extreme southwest, from central California and Yuma, Ariz., to northwestern New Mexico, there is a region where 100, or even 150 days, may pass entirely without rain. The number of consecutive days without rain decreases from here in a northeastward direction. The line for one month, or 30 days, without rain is interesting from its association with the calendar month. It begins in the vicinity of Puget Sound, in the Northwest, extends down to the southward of Spokane, Wash.; thence eastward to the north of Bismarck, N. Dak., on the upper Missouri River; thence southward and a little to the eastward, terminating in the Gulf just east of Galveston, Tex. To the westward of this line we have more than 30 days without rain. To the eastward less than 30 days have occurred without rain in the years of observations so far, except in the Southeast and a little area in and adjoining southern New Jersey. In these two areas 30 days, or more, have passed without rain. At Key



West, Fla., 39 days have passed without rain; at Jacksonville, Fla., 34; at Titusville, Fla., only 27.

The area with the smallest number of days without rain incloses the lower Lakes, Ohio, West Virginia, and parts of the neighboring States. The minimum of 15 days is at Rochester, N. Y. At Toledo and Cleveland, Ohio, and Oswego, N. Y., 18 days is the greatest number. This area also extends to the eastward, and at Eastport, Me., 14 days only, or a fortnight, is the longest number of consecutive days which have passed without rain.

If the physician wishes to send his patient where precipitation is most frequent it should be to the eastward of the lower Lakes, or to northern New England. If he wishes to send him for any reason to regions where rain is infrequent and where anywhere from three to five months may elapse without rain, then the patient should go to the southwestern part of the United States.

18. *Thunderstorms*.—The compilation of thunderstorms is from 1884 to 1892. In the early years of the Signal Service observers generally made but a single note of the occurrence of a thunderstorm without giving any of the details of the storm itself or of the attendant phenomena. In the spring of 1884 a general order was issued directing that a record be made of the time of beginning and ending; temperature and direction of wind both before and after the storm; hailfall, time of beginning and ending; and size of hailstones. Storms which passed near the station, and yet from which no rain fell, were to be included, provided thunder could be distinctly heard. From this date the record of thunderstorms was kept uniformly at all stations, and there was a report made at the end of the month which embodied the chief characteristics of each storm. The time of occurrence was given on local meridian time up to January, 1885, and after that on seventy-fifth meridian time. While this change does not seriously affect the record in the eastern part of the country, it introduces an element of uncertainty in the data for the central and western portions, though no greater, it is thought, than that due to a lack of observations during the night hours. The opportunity of observing thunderstorms during the earlier years continued up to and sometimes after midnight. All storms recorded as beginning and ending during the night were classed as beginning between midnight and 6 a. m. Thunderstorms occurring at intervals were recorded as two storms, but when they followed each other closely but one storm was recorded.

Map 1 on Sheet xxiii gives the average annual number of storms from 1884 to 1892. Constructing the lines of annual number of thunderstorms, we find that the region of greatest number is in the southeastern part of the United States. The line for 40 per year passes through southern Georgia, southern Alabama, and southeastern Mississippi. The number decreases northeastward, and the area in which less than 10 thunderstorms occur each year is confined to the coast of New England. The thunderstorms on the Pacific coast are not taken into consideration.

The seasons in which occur a maximum number of thunderstorms are of some special interest, and the results are shown on Map 2 of Sheet xxiii. It appears that from May to June the maximum is in the northeastern and central States, especially in a region extending along the Mississippi Valley from Keokuk, Iowa, to Cairo, Ill. Parallel to the line of maximum for May and June comes the maximum for July, extending in a band from northern Montana to central Texas; thence to Georgia, and thence northeastward to southern Maine. There is also a small area in which the maximum is from June to July about Lake Huron. The maximum for a month later, August, occurs in the vicinity of Salt Lake, Utah, and along the Gulf and Atlantic coasts. On the southern part of the Peninsula of Florida the maximum occurs in August and September. It appears, therefore, that the maximum of thunderstorms comes earliest to the west and southwest of the Great Lakes, and gradually extends, as time passes, to the outlying regions to the west, to the south, and to the east.

A matter of especial interest is the occurrence of winter thunderstorms. They are in some respects a different type of storm. Plotting them we find that the area of maximum frequency is in Louisiana and vicinity (Map 3 of Sheet xxiii), where the number occurring per year varies from

10 to 16 per cent of all. The line of 5 per cent of all thunderstorms is parallel to this and covers an area somewhat more extensive. There are also two or three points along the Atlantic coast where more than 5 per cent of the storms occur in winter, namely, Block Island and Cape Hatteras. Above a line which extends nearly parallel to the forty-fifth degree of latitude and somewhat south, as far west as the central plains, from which point it strikes northward, there are, practically, no thunderstorms that occur in winter.

In the central and eastern United States the thunderstorms come generally from the west. There are, however, some exceptions to this, and these have been entered on Map 4 of Sheet xxiii. For the most of these exceptions the direction of approach is southwest; but in a few cases still other directions are taken. The most interesting is Key West, Fla., where the direction of approach is from the east. Another is Galveston, Tex., where the approach is either from the northeast, from the north, or from the southwest. At Santa Fe, N. Mex., they approach from three different average directions. Galveston, Tex., is the only place where thunderstorms come on regularly from the north; but there are quite a number of stations where they may come from the northwest.

Observations of thunderstorms have been taken on Mount Washington, N. H., for three months in the year, July, August, and September. The number includes both those that extended to the summit and those which were below, and averaged  $3\frac{1}{4}$  per year for July,  $2\frac{1}{4}$  per year for August, and less than 1 for September. These thunderstorms come on from the west and southwest. The largest number for these months is 10 in 1885 and 1892; and the smallest number 4 in 1888, 1889, and 1891. The number in July is much larger than in the two following months.

## 31

Station.	Lat. N.	Long. W.	Elevation.	1738	1739	1740	1741	1742	1743	1744	1745	1746	1747	1748	1749	1750	1751	1752	1753	1754	1755	1756	1757	1758	1759
	° ' "	° ' "	Ft.																						
Charleston, S. C. ....	32 47	79 56	52 40	49.4	65.8	39.7	51.9	35.9	39.7	48.5	50.1	39.5	44.6	51.7	54.5	56.2	50.8	42.8	47.4	37.2	43.5	31.5	44.5	30.6	36.5
Cambridge, Mass. ....	42 22	71 07	40													42.2	53.1	38.4	52.0	46.5	38.5	35.5	41.3	53.7	48.9
				1760	1761	1762	1763	1764	1765	1766	1767	1768	1769	1770	1771	1772	1773	1774	1776	1795	1796	1797	1798	1799	1800
Cambridge, Mass. ....	42 22	71 07	40	39.0	31.8 <sup>a</sup>	24.5	39.7	36.9	32.6	37.7	42.3	36.7	31.4	41.3	45.3	48.9	32.6	37.3							
Williamsburg, Va. ....	37 15	76 40	100															147.04							
Bradford, Mass. ....	42 46	71 05														36.3	26.6								
Stowe, Mass. ....	42 26	71 30																	48.3	34.5	37.6	36.5	37.3	40.9	
Philadelphia, Pa. ....	39 57	75 09	117																					41.5	
Natchez, Miss. ....	31 34	91 27	264																				43.8	31.0	

† Average for five years, 1772-'77.

Station.	Lat. N.	Long. W.	Elevation.	1801	1802	1803	1804	1805	Pentad mean.	1806	1807	1808	1809	1810	Pentad mean.	1811	1812	1813	1814	1815	Pentad mean.	1816	1817
Stowe, Mass.	42 26	71 30	Feet.	38.8	41.9	37.3	41.0																
Philadelphia, Pa.	39 57	75 09	117	51.2	45.4	57.9	37.6																
Natchez, Miss.	31 34	91 27	264	45.4	57.9	37.6																	
New Haven, Conn.	41 18	72 56	45				43.5			38.7	46.2	49.5	44.4	39.5	43.7	47.6	44.0	53.4	55.9	50.7	50.3	37.9	43.5
Brunswick, Me.	43 54	69 57	74										42.3	28.2		38.8	40.7	37.6	48.2	48.7	38.8	39.3	38.5
New Bedford, Mass.	41 39	70 56	100																				
Station.	Lat. N.	Long. W.	Elevation.	1818	1819	1820	Pentad mean.	1821	1822	1823	1824	1825	Pentad mean.	1826	1827	1828	1829	1830	Pentad mean.	1831	1832	1833	1834
Philadelphia, Pa.	39 57	75 09	117	38.0	33.9	46.3	39.9	44.6						35.1	38.7	38.0	42.0	45.2	39.8	43.0	40.0	48.6	34.2
New Haven, Conn.	41 18	72 56	45	36.1	35.3	36.8	37.2	40.6	37.0	53.1	42.1	33.9	41.3	48.6	56.0	34.7	58.0	57.4	50.9	54.4	43.9	37.9	40.0
Brunswick, Me.	43 54	69 57	74	32.6	36.8	42.5		50.2	29.2	44.5	42.3												
New Bedford, Mass.	41 39	70 56	100	50.9	38.3	39.1		43.2	43.4	51.4	36.0	32.4		41.7	41.2	49.5	39.5	37.2	41.8	53.4	48.4	40.5	34.7
Baltimore, Md.	39 18	76 37	45	43.1	35.5	44.1		36.8	27.2		34.4	42.3		41.1	49.0	32.6	46.7	42.9	42.5	51.5	46.7	37.8	39.6
Marietta, Ohio	39 28	81 26	580											41.7	41.2	49.5	39.5	37.2	41.8	53.4	48.4	40.5	34.7
Boston, Mass.	42 21	71 04	18											41.1	49.0	32.6	46.7	42.9	42.5	51.5	46.7	37.8	39.6
West Chester, Pa.	39 58	75 35	150											41.1	49.0	32.6	46.7	42.9	42.5	51.5	46.7	37.8	39.6
Washington, D.C.	38 54	77 02	75											18.8									
Morrisville, Pa.	40 13	74 52	30											40.0	39.5	38.8	43.0	44.7	41.0	41.4	40.3	48.3	34.9
Waltham, Mass.	42 25	71 16	180											37.4	57.6	41.7	42.1	48.5	45.5	45.7	47.1	46.2	38.9
Middlebury, N. Y.	42 49	78 10	800											32.9	30.3	32.3	29.7	38.5	30.9	29.8	30.5	30.6	27.2
Flatbush, N. Y.	40 39	73 56	40											45.1	48.1	45.0	48.8	52.6	47.9	42.7	43.6	46.8	39.3
Onondaga, N. Y.	42 59	76 06	1,200											26.7	38.2	35.7	27.0				28.2	26.8	
Lansingburg, N. Y.	42 47	73 40	30											32.0	46.8	37.9	38.4	40.7	39.2	37.9	45.8	44.3	25.6
Lowell, Mass.	42 39	71 17	226											32.6	51.9	37.6	36.9	42.6	40.3	51.8	53.0	43.9	31.8
Jamaica, N. Y.	40 41	73 56	30											55.6	51.0	48.9	45.9	43.3	48.0	38.8	39.1	37.6	33.6
Utica, N. Y.	43 06	75 13	473											36.2	47.9	36.7	36.3	46.1	40.6	37.8	49.8	37.9	34.5
Albany, N. Y.	42 40	73 45	195											33.3	49.9	37.6	38.2	42.1	40.2	39.5	44.5	41.8	32.5
Troy, N. Y.	42 44	73 41	58											32.0	46.8	37.9	38.4	40.7	39.2	37.9	45.8	44.3	25.6
Fayetteville, Vt.	42 57	72 36	350											66.4	66.3	43.6	51.9		62.2	46.8			
Pompey, N. Y.	42 56	76 05	1,300											39.1	33.6	27.3	30.0			26.5	30.2		
Cambridge, N. Y.	43 01	73 23	500											51.9	43.6	38.9	35.3		42.8	46.5	47.4	29.2	
Auburn, N. Y.	42 55	76 28	650											31.0	34.7	30.6	37.9			31.0	33.7	24.7	
Clinton, N. Y.	40 57	72 11	16											47.0	31.0	42.6	46.6			38.4	41.8	36.4	40.1
Cherry Valley, N. Y.	42 48	74 47	1,335											54.1	34.6	44.5	45.1		49.0			44.1	33.8
Hamilton, N. Y.	42 49	75 34	1,127											43.5	34.2	32.9	42.8			33.3	35.1	43.1	32.4
Lowville, N. Y.	43 47	75 33	800											38.8	35.3	28.2	36.7			38.9	29.0	35.2	
Hudson, N. Y.	42 15	73 45	150											40.1	44.1	33.6	36.7			44.7	45.7	42.6	30.6
Fairfield, N. Y.	43 05	74 55	1,185													45.6				23.6	32.3		
East Hampton, N. Y.	40 58	72 11	16													31.0	42.6	46.6		38.4	41.8	36.4	40.1
Ithaca, N. Y.	42 27	76 30	417													24.4				35.7	26.7		
Montgomery, N. Y.	41 32	74 13	300													40.5				44.5	40.6	36.3	33.5
Burlington, Vt.	44 28	73 12	346													43.2					39.6	49.4	
Johnstown, N. Y.	43 00	74 23	688													40.5					32.6		35.1
Potsdam, N. Y.	44 41	74 57	394													35.4	36.5			36.8	32.1	39.4	25.3
Prattsburg, N. Y.	42 34	77 20	1,494														27.7						
Penn Yan, N. Y.	42 42	77 04	740														26.2			36.2			
Oxford, N. Y.	42 28	75 32	961														32.3			30.2	30.9	26.0	22.3
Kingston, N. Y.	41 55	74 02	188														36.7			33.7	30.6	32.7	29.6
Cazenovia, N. Y.	42 55	75 46	260														40.2			45.5	38.4	44.0	35.9
Newburg, N. Y.	41 31	74 00	150														39.0			41.6	37.2	37.6	33.6
Portsmouth, Ohio	38 42	82 53	537																	34.8	43.3	41.0	29.2
Rochester, N. Y.	43 07	77 51	506														26.5			42.3	45.4	36.7	29.5
Fredonia, N. Y.	42 26	79 24															34.1						17.0
North Salem, N. Y.	41 20	73 34	361														33.9			35.9	41.0		
Steubenville, N. Y.	40 25	80 41	670														43.0			43.0	40.9	43.3	33.5
Huntsville, Ala.	34 43	86 40	600																	43.5	39.9	35.6	38.7
Lewiston, N. Y.	43 09	79 10	280														43.5			46.4	67.6	63.0	63.0
Buffalo, N. Y.	42 53	78 53	690																	25.2	21.4	20.9	22.5
Gouverneur, N. Y.	44 25	75 35	400																				
Key West, Fla.	24 33	81 49	10																			34.0	26.5
																						27.5	36.5

## RAINFALL AND SNOW OF THE UNITED STATES.

TABLE I.—Annual precipitation—Continued.

Station.	Lat. N.	Long. W.	Elevation. Feet.	1835	Pentad mean.	1836	1837	1838	1839	1840	Pentad mean.	1841	1842	1843	1844	1845	Pentad mean.	1846	1847	1848	1849	1850	Pentad mean.
Philadelphia, Pa.	39 57	75 09	117	39.3	41.0	42.7	39.2	45.4	43.6	47.3	43.6	55.5	48.7	46.8	40.2	40.1	46.3	44.2	45.3	34.9	42.1	54.6	44.2
Natchez, Miss.	31 34	91 27	264	39.3	41.0	42.7	39.2	45.4	43.6	47.3	43.6	55.5	48.7	46.8	40.2	40.1	46.3	44.2	45.3	34.9	42.1	54.6	44.2
Brunswick, Me.	41 54	69 57	74	39.3	41.0	42.7	39.2	45.4	43.6	47.3	43.6	55.5	48.7	46.8	40.2	40.1	46.3	44.2	45.3	34.9	42.1	54.6	44.2
New Bedford, Mass.	41 54	69 57	100	42.0	43.6	38.2	34.8	34.2	39.4	44.2	38.2	48.2	43.3	78.8	45.8	53.0	56.1	61.6	75.3	59.3	39.2	57.4	52.1
Baltimore, Md.	39 18	76 37	45	39.3	41.0	42.7	39.2	45.4	43.6	47.3	43.6	55.5	48.7	46.8	40.2	40.1	46.3	44.2	45.3	34.9	42.1	54.6	44.2
Marietta, Ohio.	39 28	81 26	580	42.5	43.9	36.8	43.7	35.4	33.1	38.9	37.6	42.9	42.0	41.7	36.7	33.9	39.4	46.2	45.5	37.9	35.4	50.3	46.2
Boston, Mass.	42 21	71 04	18	37.9	42.7	40.6	33.7	42.7	41.1	49.2	41.5	47.2	39.0	46.8	37.5	46.1	43.3	29.9	46.8	41.0	40.2	54.0	42.4
Washington, D. C.	38 54	77 02	75	39.3	41.0	42.7	39.2	45.4	43.6	47.3	43.6	55.5	48.7	46.8	40.2	40.1	46.3	44.2	45.3	34.9	42.1	54.6	44.2
Morrisville, Pa.	40 13	74 52	30	40.0	41.0	42.9	37.1	44.1	38.5	47.7	43.3	57.0	34.3	46.5	38.9	39.7	43.3	44.3	35.7	23.1	52.0	42.6	42.6
Waltham, Mass.	42 25	71 16	180	39.4	43.5	35.2	38.0	40.9	39.0	42.1	39.0	41.7	34.3	44.3	36.4	43.0	40.7	30.0	44.0	36.3	40.8	52.0	42.6
Middlebury, N. Y.	42 49	78 10	800	34.2	32.5	34.4	32.8	30.4	32.3	35.0	33.0	31.4	28.0	32.8	30.9	25.3	29.7	24.4	25.7	33.4	34.7	51.0	41.8
Flatbush, N. Y.	40 49	73 56	40	38.0	42.1	44.0	34.4	41.0	42.8	35.9	39.6	52.1	47.5	50.4	39.0	32.1	44.2	44.1	45.8	33.4	34.7	51.0	41.8
Onondaga, N. Y.	42 59	76 06	1,260	32.4	35.2	34.4	32.8	30.4	32.3	35.0	33.0	31.4	28.0	32.8	30.9	25.3	29.7	24.4	25.7	33.4	34.7	51.0	41.8
Lansingburg, N. Y.	42 47	73 40	30	32.4	35.2	34.4	32.8	30.4	32.3	35.0	33.0	31.4	28.0	32.8	30.9	25.3	29.7	24.4	25.7	33.4	34.7	51.0	41.8
Lowell, Mass.	42 39	71 17	296	32.6	35.2	33.5	33.5	30.9	37.5	38.3	38.7	36.2	40.5	38.7	39.4	35.7	39.1	37.5	46.3	42.4	41.8	51.0	41.9
Jamaica, N. Y.	40 41	73 56	30	28.7	35.6	39.5	34.1	33.6	33.4	35.5	34.2	44.4	41.6	35.8	40.0	33.7	39.1	35.9	44.5	32.8	30.2	44.6	37.6
Utica, N. Y.	43 06	75 13	473	38.7	39.7	44.6	41.2	42.0	38.3	46.0	42.1	38.0	56.4	47.5	32.1	40.5	43.9	39.3	41.0	41.8	42.2	40.3	43.6
Albany, N. Y.	42 44	73 45	193	40.5	39.8	44.6	41.2	42.0	38.3	46.0	42.1	38.0	56.4	47.5	32.1	40.5	43.9	39.3	41.0	41.8	42.2	40.3	43.6
Troy, N. Y.	42 44	73 41	58	42.2	35.2	33.5	33.5	30.9	18.3	29.2	29.1	27.9	29.7	32.7	24.4	30.8	29.1	37.5	35.5	38.7	33.9	40.9	37.3
Pompey, N. Y.	42 56	76 05	1,300	33.3	30.3	34.2	31.6	44.3	40.3	37.4	30.6	28.3	40.8	49.7	39.9	34.5	35.6	33.2	39.9	38.7	40.8	45.2	37.3
Cambridge, N. Y.	43 01	73 23	500	35.9	40.4	34.2	31.6	44.3	40.3	37.4	30.6	28.3	40.8	49.7	39.9	34.5	35.6	33.2	39.9	38.7	40.8	45.2	37.3
Auburn, N. Y.	42 55	76 28	650	34.3	31.3	31.3	29.1	21.8	33.6	37.4	30.6	28.3	40.8	49.7	39.9	34.5	35.6	33.2	39.9	38.7	40.8	45.2	37.3
Clinton, N. Y.	42 57	72 11	16	30.5	37.4	35.0	35.2	29.0	16.4	43.3	37.9	43.7	32.5	44.1	34.3	36.5	39.8	31.1	31.7	30.6	27.2	44.6	37.6
Cherry Valley, N. Y.	42 48	74 47	1,335	34.9	39.1	40.1	31.1	28.5	40.0	28.7	37.3	33.0	33.0	44.1	34.3	36.5	39.8	31.1	31.7	30.6	27.2	44.6	37.6
Hamilton, N. Y.	42 49	75 34	1,127	39.1	39.6	34.7	32.5	27.6	30.0	37.2	32.4	35.4	51.5	36.1	39.6	40.6	25.6	35.3	33.2	29.5	37.0	44.6	37.6
Lowville, N. Y.	43 47	75 33	180	34.2	39.6	34.7	32.5	27.6	30.0	37.2	32.4	35.4	51.5	36.1	39.6	40.6	25.6	35.3	33.2	29.5	37.0	44.6	37.6
Hudson, N. Y.	42 15	73 45	1,185	36.0	37.4	35.6	35.2	29.0	16.4	43.3	37.9	43.7	32.5	44.1	34.3	36.5	39.8	31.1	31.7	30.6	27.2	44.6	37.6
Fairfield, N. Y.	43 08	74 55	16	30.5	37.4	35.6	35.2	29.0	16.4	43.3	37.9	43.7	32.5	44.1	34.3	36.5	39.8	31.1	31.7	30.6	27.2	44.6	37.6
East Hampton, N. Y.	40 58	72 11	417	30.5	37.4	35.6	35.2	29.0	16.4	43.3	37.9	43.7	32.5	44.1	34.3	36.5	39.8	31.1	31.7	30.6	27.2	44.6	37.6
Ithaca, N. Y.	42 27	76 30	300	26.3	36.2	29.9	33.5	27.5	27.8	37.2	32.2	32.7	33.8	26.6	31.4	36.1	32.1	29.7	38.4	31.4	26.2	37.5	32.6
Montgomery, N. Y.	41 32	74 13	346	26.3	36.2	29.9	33.5	27.5	27.8	37.2	32.2	32.7	33.8	26.6	31.4	36.1	32.1	29.7	38.4	31.4	26.2	37.5	32.6
Burlington, Vt.	44 28	73 12	688	41.1	37.3	37.3	30.4	49.6	22.9	32.5	26.1	20.7	28.6	34.1	31.7	31.0	29.2	25.9	26.7	26.7	26.7	26.7	26.7
Johnstown, N. Y.	43 01	74 23	394	29.7	29.4	19.6	28.7	26.8	22.9	32.5	26.1	20.7	28.6	34.1	31.7	31.0	29.2	25.9	26.7	26.7	26.7	26.7	26.7
Potomac, N. Y.	42 44	77 01	1,494	26.8	27.2	27.8	24.5	31.3	31.5	29.6	28.9	24.1	31.5	29.3	20.1	24.5	25.9	28.9	27.7	22.8	23.0	31.8	26.8
Penn Yan, N. Y.	42 42	77 01	740	38.7	32.5	41.1	36.6	33.1	36.7	41.0	37.7	36.4	45.4	41.2	34.8	33.3	33.5	35.4	40.2	40.8	37.6	37.6	37.6
Oxford, N. Y.	42 28	75 32	961	33.9	39.5	37.2	34.2	37.3	34.0	32.7	35.1	36.8	37.9	33.2	44.2	39.8	39.0	39.2	35.5	41.6	38.3	55.5	37.7
Kingston, N. Y.	41 55	74 02	188	33.9	39.5	37.2	34.2	37.3	34.0	32.7	35.1	36.8	37.9	33.2	44.2	39.8	39.0	39.2	35.5	41.6	38.3	55.5	37.7
Casnovia, N. Y.	42 55	75 46	260	34.3	36.1	40.5	41.2	36.2	44.3	39.1	37.4	30.7	34.3	31.9	31.9	31.9	34.7	29.8	34.8	33.8	55.5	37.7	37.7
Newburg, N. Y.	41 31	74 00	150	25.0	30.2	24.8	48.3	44.5	39.1	37.4	30.7	34.3	31.9	31.9	31.9	34.7	29.8	34.8	33.8	55.5	37.7	37.7	37.7
Portsmouth, Ohio	38 42	82 53	537	25.5	35.9	30.6	47.8	36.5	27.2	41.6	36.7	45.3	41.1	52.9	35.3	40.2	43.0	45.2	49.3	41.3	43.3	58.2	47.5
Rochester, N. Y.	43 07	77 51	506	28.7	35.9	29.0	30.6	25.4	30.2	29.3	32.3	33.2	30.1	26.1	34.2	31.2	37.1	35.8	32.1	32.8	38.7	35.3	35.3
Frederonia, N. Y.	42 26	79 24	41.0	41.0	39.1	36.4	39.8	31.9	30.6	39.8	35.7	39.3	30.0	39.1	32.2	33.3	47.3	37.5	42.6	55.5	44.8	44.8	44.8
North Salem, N. Y.	41 20	73 34	361	35.0	39.1	36.4	39.8	31.9	30.6	39.8	35.7	39.3	30.0	39.1	32.2	33.3	47.3	37.5	42.6	55.5	44.8	44.8	44.8
Steuensville, Ohio	40 25	80 41	670	38.2	39.2	39.2	35.2	28.2	28.2	37.6	33.7	31.3	41.3	41.1	38.7	38.4	38.2	52.2	57.3	50.3	47.4	46.9	50.8
Huntsville, Ala.	34 43	86 40	600	60.4	56.2	54.6	47.0	48.4	18.0	23.2	19.1	18.4	44.8	34.8	25.5	35.1	37.4	45.8	48.4	38.5	40.4	42.1	42.1
Lewiston, N. Y.	43 09	79 10	280	25.8	23.2	20.0	20.0	18.0	23.2	19.1	18.4	44.8	34.8	25.5	35.1	37.4	45.8	48.4	38.5	40.4	42.1	42.1	42.1
Buffalo, N. Y.	42 53	78 53	690	46.0	40.1	38.9	20.5	19.7	19.7	22.8	19.1	18.4	44.8	34.8	25.5	35.1	37.4	45.8	48.4	38.5	40.4	42.1	42.1
Gouverneur, N. Y.	44 25	75 35	400	46.0	40.1	38.9	20.5	19.7	19.7	22.8	19.1	18.4	44.8	34.8	25.5	35.1	37.4	45.8	48.4	38.5	40.4	42.1	42.1
Key West, Fla.	24 33	81 49	10	30.1	24.3	38.9	20.5	19.7	19.7	22.8	19.1	18.4	44.8	34.8	25.5	35.1	37.4	45.8	48.4	38.5	40.4	42.1	42.1
Hanover, N. H.	43 42	72 17	530	31.7	37.8	35.4	40.6	32.0	45.0	38.2	38.1	47.7	55.8	47.7	38.2	45.5	37.4	45.8	48.4	38.5	40.4	42.1	42.1
Cincinnati, Ohio	39 06	84 35	628	52.3	57.3	42.6	39.6	30.8	47.2	43.5	41.1	41.5	51.1	43.0	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1
Granville, N. Y.	43 20	73 17	250	31.0	28.6	28.9	28.0	30.2	23.9	30.0	26.0	30.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1
Amherst, Mass.	42 22	72 32	267	40.7	38.9	39.9	42.9	47.0	41.9	41.6	38.0	40.5	39.9	42.3	34.9	47.8	48.9	64.8	37.0	31.8	54.5	47.4	47.4
New York, N. Y.	40 43	74 00	159	27.0	65.5	41.6	43.0	29.6	41.1	42.1	33.9	41.3	36.4	34.1	37.6	48.9	64.8	37.0	31.8</				

# RAINFALL AND SNOW OF THE UNITED STATES.

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TABLE I.—*Annual precipitation*—Continued.

Station.	Lat. N.	Long. W.	Elevation.	1835	Pentad mean.	1836	1837	1838	1839	1840	Pentad mean.	1841	1842	1843	1844	1845	Pentad mean.	1846	1847	1848	1849	1850	Pentad mean.
Fort Scott, Kans.....	37 51	94 41	802	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	44.6	62.5	61.7	.....	34.1	34.5	29.1	45.6	30.0	34.7
Mount Vernon Arsenal, Ala..	31 12	88 02	200	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	76.4	.....	68.5	.....	65.3	71.2	49.6	79.2	49.4	62.9
Newark, N. J.....	40 44	74 10	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40.3	36.8	.....	51.7	53.8	36.8	40.1	51.0	46.7
Lambertville, N. J.....	40 23	74 57	72	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40.4	42.7	.....	45.0	51.2	34.2	43.8	53.4	45.5
Fort Washita, Ind. T.....	34 14	96 38	645	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	36.1	34.6	.....	49.7	37.4	35.3	64.2	41.4	45.6
Oswego, N. Y.....	43 29	76 35	335	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	34.4	.....	.....	.....	.....	.....	27.1	34.6	.....
St. Augustine, Fla.....	29 54	81 18	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	29.1	33.1	.....	.....	.....	.....	.....	.....	.....
Harrisburg, Pa.....	40 16	76 53	320	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	29.1	30.3	.....	47.1	32.3	23.3	22.2	.....	.....
Fort Mackinac, Mich.....	45 51	84 40	728	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	19.8	.....	17.6	23.2	.....	20.3	26.9	.....
Muscatine, Iowa.....	41 26	91 05	586	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	34.6	28.4	39.6	59.2	49.1	42.2
Carlisle Barracks, Pa.....	40 12	77 14	500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23.8	47.4	.....

## RAINFALL AND SNOW OF THE UNITED STATES.

TABLE I.—*Annual*

Number.	State and station.	Lat. N.	Long. W.	Elevation.	1851	1852	1853	1854	1855	Pentad mean.	1856	1857	1858	1859	1860	Pentad mean.	1861	1862	1863	1864	1865	Pentad mean.	1866	1867	1868
Alabama.																									
1	Auburn	32 37	85 34	821					37.5		45.7														
2	Carlisle	32 05	87 15	400							47.5	59.2	59.7											49.5	64.8
3	Decatur	34 35	86 58	577																					
4	Green Springs	32 47	87 43	500					35.9		55.5	50.2	55.4											40.5	58.4
5	Greensboro	32 42	87 35	220					37.5		52.3	47.9	53.5											48.0	
6	Livingston	32 34	88 19	150																					
7	Mobile	30 41	88 02	69																					
8	Montgomery	32 23	86 18	219																					
9	Moulton	34 27	87 25	643																					
10	Union Springs	32 08	85 40	516																					
11	Valley Head	34 30	85 30	1,058																					
12	Mt. Vernon Ars'l.	31 12	88 02	200	48.8	51.5	106.5	62.1	59.7	65.7	58.1	49.7	64.3	65.0	50.6	57.5									
13	Huntsville	34 43	86 40	600																					
Alaska.																									
14	Pyramid Harbor	59 00	136 00	43																					
15	St. Michaels	63 28	161 48	30																					
16	St. Paul Island	57 10	170 01	40																					
17	Sitka	57 03	135 19	63	72.5		90.9	87.3			87.5	89.7	81.2	81.7			58.8	85.9	74.2						66.2
Arkansas.																									
18	Arkansas City	33 33	91 08	145																					
19	Camden	33 32	92 48	123																					
20	Fort Smith	35 22	94 24	418		61.0	24.3	37.8	33.9		29.5	38.7													
21	Helena	34 33	90 36	197																					
22	Hot Springs	34 05	93 01	1,540																					
23	Lead Hill	36 29	92 05																						
24	Little Rock	34 45	92 05	298																					
25	Mount Ida	34 41	93 38																						
26	Newport	35 31	91 09	233																					
27	Washington	33 34	93 41	660	41.5	69.5	55.2	59.2	47.6	54.6	46.2	57.1	56.7	46.1	64.6	54.1					</				

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TABLE I.—Annual

Number.	State and station.	Lat. N.	Long. W.	Elevation.	1851	1852	1853	1854	1855	Pentad mean.	1856	1857	1858	1859	1860	Pentad mean.	1861	1862	1863	1864	1865	Pentad mean.	1866	1867	1868
	<i>California—Cont'd.</i>	°	'	<i>Feet.</i>																					
101	Knights Landing..	38 47	121 41	35																					
102	La Grange.....	37 42	120 28	250																					18.7
103	Lathrop.....	37 49	121 16	25																					
104	Lemoore.....	36 17	119 51	227																					
105	Lewis Creek.....	36 12	118 58	456																					
106	Livermore.....	37 40	121 45	485																					
107	Los Angeles.....	34 03	118 12	371																					
108	Los Banos.....	37 04	120 58																						
109	Mammoth Tank.....	33 07	115 17	265																					
110	Martinez.....	38 02	122 09	9																					
111	Marysville.....	39 09	121 35	69																					
112	Mendocino.....	39 18	123 48																						
113	Menlo Park.....	37 27	122 11	72																					
114	Merced.....	37 19	120 30	171																					
115	Modesto.....	37 38	120 58	90																					
116	Mojave.....	35 03	118 11	2,751																					
117	Monterey.....	36 37	121 52	40																17.1	8.3		21.6		
118	Mount Hamilton.....	37 20	121 30	4,250																					
119	Napa.....	38 18	122 17	20																					
120	Nevada City.....	39 17	121 00	2,500																48.0	38.2		82.7	102.8	64.5
121	Newhall.....	34 25	118 33	1,268																					
122	Niles.....	37 35	121 58	87																					
123	Oakland.....	37 48	122 15	25																					
124	Pajaro.....	36 53	121 44	31																					
125	Petaluma.....	38 24	122 38	10																					
126	Pigeon Point.....	37 12	122 21	150																					
127	Pilarcitos.....																				33.9		70.0	73.4	55.1
128	Placerville.....	38 44	120 48	2,109																					
129	Pleasanton.....	37 41	121 47	360																					
130	Pt. Ano Nuevo L. H.	37 09	122 18																						
131	Point Arena L. H.	38 54	123 36	6																					
132	Point Bonita L. H.	37 48	122 33	124																					
133	Pt. Conception L. H.	34 26	120 24	258																					
134	Pt. Montara L. H.	37 32	122 31																						
135	Point Reyes L. H.	38 00	123 00	296																					
136	Pomona.....	34 03	117 46	857																					
137	Poway.....	32 58	117 01	540																					
138	Princeton.....	39 23	122 02	100																					
139	Ravenna.....	34 26	118 17	2,358																					
140	Red Bluff.....	40 10	122 15	342																					
141	Redding.....	40 36	122 27	565																					
142	Rings Station.....	34 02	116 56	4,300																					
143	Riverside.....	34 00	117 20	850																					
144	Rocklin.....	38 49	121 13	249																					
145	Ross, Fort.....	38 35	123 05																						
146	Salinas City.....	36 41	121 36	45																					
147	San Andreas.....	37 05	121 25																						
148	San Bernardino.....	34 06	117 18	452																					
149	Sacramento.....	38 35	121 30	64	15.1	27.0	19.9	19.7	18.7	20.1	14.1	17.0	16.8	16.8	19.8	16.9	20.9	27.4	12.3	19.3	11.3	18.2	26.4	29.9	19.6
150	San Fernando.....	34 10	118 26	1,066																					
151	San Diego.....	32 43	117 14	150	7.3	11.8	7.8	11.8	11.2	10.0	9.9	6.2	7.5	6.2	9.0	7.8	7.8	11.6	2.9	7.4	7.5	7.4	12.2	15.6	1.0
152	San Francisco.....	37 48	122 26	60	14.7	28.3	20.7	22.6	26.7	22.6	22.2	20.8	23.4	21.4	20.5	21.7	25.5	38.5	14.6	21.6	13.7	22.8	36.4	30.8	30.1
153	San Rafael.....	37 59	122 37	25																					
154	San Mateo.....	37 54	122 19	30																					
155	San Luis Obispo.....	35 18	120 39	20																					
156	Santa Barbara.....	34 25	119 49	270																					
157	Santa Cruz.....	36 58	122 02	25																					15.7
158	Scott Valley.....	41 45	123 02	2,570																					
159	Shingle Springs.....	38 39	120 55	1,393																					
160	Soledad.....	36 26	121 27	188	23.4	40.6	40.9	27.9	18.4	30.2	18.4	23.0	21.5	36.1	23.5	24.5	35.2	67.7	23.6	34.9	25.0	37.3	50.7	60.8	14.9
161	South Vallejo.....	38 06	122 20	23																					
162	Spadra.....	34 03	117 46	75																					
163	Stockton.....	37 58	121 15	20																					
164	Sumner.....	35 24	119 00	422				10.9	20.1		11.7	11.5													
165	Summit.....	39 10	120 27	7,017																					
166	Tehachapi.....	35 06	118 26	3,964																					
167	Tehama.....	40 02	122 07	220																					
168	Tracy.....	37 45	121 26	76																					
169	Truckee.....	39 19	120 01	5,819																					
170	Tulare.....	36 13	119 19	289																					
171	Turlock.....	37 30	120 52	106																					
172	Ukiah.....	39 08	123 24	644																					
173	Vacaville.....	38 21	121 58	175																					
174	Visalia.....	36 20	119 17	348																					
175	Weaverville.....	40 47	123 27	2,000																					
176	West Butte.....	39 18	121 55	90																					
177	White Water.....	33 54	116 39	1,126																					
178	Williams.....	39 10	122 10	89																					
179	Willows.....	39 31	122 12	132																					
180	Woodland.....	38 42	121 59	45																					
181	Wright, Camp.....	39 45	123 00	1,800																	33.3		63.1	38.8	
182	Yerba Buena L. H.	37 48	122 22	39																					
183	Yreka.....	41 45	122 32	2,635																					
184	Yuma, Fort.....	32 44	114 36	200			1.7	4.6	1.8		1.6	0.3	2.1	4.8	1.4	2.0	2.0	14.7							



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1869	1870	Pentad mean.	1871	1872	1873	1874	1875	Pentad mean.	1876	1877	1878	1879	1880	Pentad mean.	1881	1882	1883	1884	1885	Pentad mean.	1886	1887	1888	1889	1890	Pentad mean.	1891	Number.
17.5	12.7		16.7	19.0	10.8	17.6	14.8	15.8	13.9	7.7	17.7	16.5	17.4	14.6	15.4	12.1	11.9	24.6	16.4	16.0	12.9	14.6	20.1	30.6	18.1	19.2	15.1	101
											14.2	13.1	15.3		14.3	14.1	15.4	31.3	14.4	17.9	14.2	13.4	14.1	23.6	18.0	16.6		102
												5.0	8.6		9.6	9.2	10.7	15.1	9.0	11.3	8.5	6.9	11.7	17.3	11.6	11.2	9.9	103
												7.9	14.3		5.5	4.9	6.8	19.5	12.2	9.8	8.7	7.4	7.1	11.8	6.3	8.2	5.0	104
			17.7	11.3	11.2	10.9	16.3	13.5	12.5	7.0	15.1	13.2	20.5	13.7	10.9	12.5	13.0	27.5	12.4	15.3	10.2	13.8	15.0	24.6	17.6	16.2	15.6	105
				16.8	21.2	26.1			18.6	10.1	20.9	17.3	18.6	17.1	5.6	10.7	14.2	40.5	10.6	16.3	17.2	16.4	20.9	33.3	12.6	20.1	12.9	106
									4.9	2.8	8.3	4.4	7.2	5.5	4.6		6.6			6.9	3.1	8.9	12.7	7.9	7.9	7.6		107
											1.3	1.7	1.0		2.5	2.2	2.0	2.8	1.6	2.2	1.2	2.0	2.6	5.5	1.5	2.6		108
											18.2	21.2			15.9	12.6	11.8	27.4	16.8	16.9	12.9	12.5	16.2	31.4	23.7	19.3	17.1	109
			17.7	23.5	17.5	13.5			16.2	11.2	22.3	20.9	18.4	17.8	16.5	15.1	11.6	18.4	14.3	15.2	12.8	14.7	20.8	33.8	23.5	21.1	17.0	110
			50.8	43.3	49.4	62.5			65.0	43.8	73.9	75.3	53.7	62.3	46.9	34.3	26.0	44.7	51.6	40.7								111
												18.5	21.0		12.0	10.0	10.9	26.0	13.0	14.4	13.2	10.5	14.7	26.9	18.3	16.7	18.2	112
												8.5	13.8	8.8	8.0	9.0	10.2	23.7	9.8	12.1	7.7	6.3	10.6	12.8	11.5	9.8	8.4	113
			8.0	10.6	7.9	11.6	10.9	9.8	7.9	5.2	10.4	13.0	11.2	9.5	5.8	8.3	8.7	14.5	8.4	9.1	8.7	5.7	8.5	13.1	10.5	9.3	7.7	114
											5.8	5.4	3.2		0.3	1.3	0.3	13.4	3.8	3.8	3.7	6.8	8.4	15.9	3.0			115
											28.6	15.4	17.1		11.9	14.7	15.5	26.5	11.9	16.1	12.3	10.5	14.6	25.1	16.0	15.7	13.4	116
															23.0	29.7	32.2	30.1	18.4	28.6	25.2	30.8	25.4	35.8	29.9	29.4		117
															25.4	17.0	17.9	30.4	17.8	21.4	17.8	21.4	20.7	34.9	30.7	25.2	26.2	118
55.4	50.4	71.1	65.1	62.1	48.3	55.7	51.3	56.5	53.7	30.0	54.9	69.5	70															

## RAINFALL AND SNOW OF THE UNITED STATES.

TABLE I.—*Annual*

Number.	State and station.	Lat. N.	Long. W.	Elevation.	1851	1852	1853	1854	1855	Pentad mean.	1856	1857	1858	1859	1860	Pentad mean.	1861	1862	1863	1864	1865	Pentad mean.	1866	1867	1868
Connecticut—Cont'd.																									
203	Southington.....	41 35	72 51	294																					
204	Trumbull, Fort....	41 20	72 08	23															23.5	20.3			44.3	49.1	54.6
205	Wallingford..... Delaware.	41 27	72 40	133									41.7	56.9	41.9		48.8				52.6		51.1	51.2	51.9
206	Delaware, Fort....	39 35	75 34	10					39.5		31.4	26.0	17.1							38.0	50.9				
207	Del. Breakwater ..	38 48	75 10	20																					
208	Dover.....	39 10	75 30	40																					
209	Milford.....	38 45	75 25	20																					
District of Columbia.																									
210	Washington..... Florida.	38 54	77 03	115		40.4	33.5	31.7	29.7		33.4	41.3	39.5	42.4	37.5	38.8	43.5	39.1	45.2	36.4	48.7	42.6	49.5	57.8	47.1
211	Alva.....	26 45	81 33	15																					
212	Archer.....	29 30	82 30	77																					
213	Biscayne.....	25 53	80 07	12																					
214	Cedar Keys.....	29 08	83 02	22		55.6	54.0	39.5	34.3		34.5		54.3	51.6											
215	Daytona.....	29 12	81 01	10																					
216	Jacksonville.....	30 20	81 39	43																					
217	Jefferson, Fort....	24 38	82 62	11													23.7	40.4	50.7	30.9	40.4	37.2		88.1	28.2
218	Jupiter.....	26 57	80 07																						
219	Key West.....	24 34	81 49	27	53.8	46.4	45.6	44.6	44.6	47.0	40.3	38.8	35.7	31.7	34.6	36.2	30.6	33.8	30.6	43.9	41.3	36.0			
220	Lake City.....	30 13	82 40	216																					
221	Manatee.....	27 27	82 35	16																					
222	Mayport.....	30 24	81 25	15																					
223	Meade, Fort.....	27 46	81 50	80			46.4	*18.3	52.2																
224	Merritt's Island..	28 22	80 41	22																					
225	Myers, Fort.....	26 38	81 46	50	61.7	74.1	82.8	44.8	54.8	63.6	48.9	40.1													
226	Pensacola.....	30 25	87 13	30																					
227	Peirce, Fort.....	27 30	80 20	30				96.5	46.8		58.1	54.4													
228	Punta Rasa.....	26 30	82 00	13																					
229	St. Marks.....	30 10	84 12	15																					
230	Sanford.....	28 48	81 23	25																					
231	Tallahassee.....	30 27	84 16	200																					
232	Tarpon Springs†	28 10	84 45																						
233	Titusville.....	28 34	80 51	9																					
234	Brooke, Fort.....	28 30	82 28	20		69.3	45.0	77.3	40.7		55.7	36.0													
235	Barrancas, Fort†	30 21	87 18	20	46.5	56.2	50.9	50.9	77.5		53.6	67.8			50.1										
236	St. Augustine..... Georgia.	29 54	81 18	25	33.9							40.8	49.9	47.5											
237	Americus.....	32 03	84 14	362																					
238	Atlanta.....	33 45	84 23	1,050											64.5										
239	Athens.....	33 58	83 23	850																					
240	Augusta.....	33 28	81 54	183																					
241	Brunswick.....	31 10	81 27	14																					
242	Carrollton.....	33 36	85 04																						
243	Forsyth (near).....	33 00	83 55	735																					
244	Gainesville.....	34 16	83 47	1,227																					
245	La Grange.....	33 02	85 01	742																					
246	Milledgeville.....	33 05	83 14	310																					
247	Nashville.....	31 15	83 19																						
248	Quitman (near).....	30 45	83 50	170																					
249	Rabun Gap.....	34 59	83 22	1,900																					
250	Rome.....	34 16	85 08	627																					
251	Savannah.....	32 05	81 05	87	43.9	54.8	47.0	43.1	38.6	45.5	45.4	33.4	53.3	63.7	60.2	66.7									
252	Sparta.....	33 15	82 54	567			48.8	44.5	51.4		51.9	39.5	63.1												
253	St. Marys.....	30 44	81 34	25																					
254	Thomson.....	33 29	82 25	517																					
255	Tybee Island.....	32 00	80 52	29																					
256	Walthourville.....	31 44	81 38	92																					
257	Whitemarsh..... Idaho.	32 03	81 02	20	30.0	49.8	45.7	41.3	37.4	40.8	38.7	30.8	52.5	45.7											
258	Boise City.....	43 34	116 08	2,768																					
259	Boise, Fort.....	43 34	116 08	2,880																	11.6				6.7
260	Eagle Rock.....	43 30	116 05	4,781																					
261	Lewiston.....	46 23	117 00																						
262	Lapwai, Fort.....	46 18	116 54	2,000																					
263	Sherman, Fort..... Indiana.	47 42	116 38	2,198																14.1					
264	Angola.....	41 36	85 00	1,052																					
265	Aurora.....	39 04	84 55	509																					
266	Butlerville.....	39 03	85 33	767																			40.8	36.2	44.6
267	Columbia City.....	41 09	85 30	863																					
268	Columbus.....	39 13	85 56	632																					
269	Connersville.....	39 40	85 03	844																					
270	Degonia Springs.....	38 06	87 12	445																					
271	Evansville.....	38 02	87 29	390																					
272	Farmiland.....	40 11	85 10	1,040																					
273	Indianapolis.....	39 46	86 10	753																					
274	Jeffersonville.....	38 18	85 42	427																					
275	Laconia.....	38 05	86 07	530																					
276	Lafayette.....	40 28	86 54	667																		43.2	45.1	45.1	
277	Logansport.....	40 45	86 22	600																					
278	Mauzy.....	39 37	85 23																						
279	Marengo.....	38 24	86 24	363																					
280	Merom.....	39 05	87 40	560																					
281	New Harmony.....	38 10	87 54	350				35.7	48.0		23.3	39.8	48.6	44.3			37.4	46.5	32.5	33.6	45.3	39.1	37.5	36.9	37.3
282	Princeton.....	38 23	87 35	481																			34.9	42.8	
283	Richmond.....	39 51	84 53	850																					
284	St. Meinrads Abbey	38 13	86 45	600		46.3	32.1	45.1	56.7	23.4		39.2	56.0	46.9	38.2	40.9	39.6	49.7	37.0	34.1	55.4	43.2	56.5	41.7	
285	Spiceland.....	39 48	85 18	1,025																38.6	34.5	47.3	58.0	30.4	45.7
286	Sunman.....	39 14	85 06	1,018																					
287	Vevay.....	38 46	84 59	525																					

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[illegible]



TABLE I.—Annual

Number.	State and station.	Lat. N.	Long. W.	Elevation.	1851	1852	1853	1854	1855	Pentad mean.	1856	1857	1858	1859	1860	Pentad mean.	1861	1862	1863	1864	1865	Pentad mean.	1866	1867	1868
Illinois—Cont'd.																									
300	Elmira	41 10	89 49	505																	38.0		34.4	24.4	34.8
301	Geneseo	41 27	89 06																						
302	Golconda	37 23	88 30																					32.9	30.4
303	Grand Tower	37 39	89 30	352																					
304	Griggsville	39 43	90 44	650																					
305	Galesburg	40 56	90 22	786																					
306	Greenville	38 50	89 25	555															42.9		32.8	36.2		32.0	23.2
307	Havana	40 18	90 05	475																					
308	Hennepin	41 16	89 21																						
309	Irishtown	38 40	89 30																						
310	Louisville	38 46	88 30	500																					
311	McLeansboro	38 07	88 35	462																					
312	Manchester	39 31	90 34	683					48.1		31.0	33.7	49.4	42.4			30.0	39.9		27.3			43.7	29.0	37.9
313	Mattoon	39 29	88 24	724																					
314	Mount Carmel	38 27	87 49	424																					
315	Marengo	42 15	88 37	842	56.9	42.1	45.2				31.4	37.9	50.2	29.9	29.8	35.8	36.7	41.1	25.6	24.0	37.1	32.9	39.8	27.9	44.8
316	Mt. Sterling	39 58	90 47	525																					
317	Oswego	41 40	88 22	670																					
318	Ottawa	41 22	88 48	500							29.5	34.7	47.2	27.8	30.8	34.0	38.9	55.7	36.7	29.4	36.6	39.5	32.8	28.2	33.5
319	Palestine	39 05	87 45	500																					
320	Pana	39 25	89 07	735																					
321	Philo	39 59	88 08	771																					
322	Peoria	40 42	89 36	475							26.0	30.6	53.4	30.1	34.2	34.9	30.3	48.3	32.1	31.0	37.1	35.8	35.7	24.6	35.8
323	Pontiac	40 54	88 40	600																					
324	Rockford	42 15	89 05	732																					
325	Rock Isl'd Arsenal	41 32	90 38	528																				29.2	34.3
326	Sandwich	41 31	88 32	690																					
327	Springfield	39 48	89 39	644											50.2		68.6	70.4	50.4	38.3	34.3	52.4	36.2	40.0	25.9
328	Sycamore	42 00	88 42	800																					
329	Winnebago	42 17	89 12	900									45.2	26.5	32.9		44.6			29.0	44.8		38.9	26.6	35.2
330	Watsco	40 48	87 45	640																					
331	Wyandot	41 30	89 45	750																	50.1		34.4	27.9	36.2
Indian Territory.																									
332	Arbuckle, Fort.	34 50	97 22	1,000	24.4	46.0	26.7	28.2	29.8	31.0	42.1	47.4		28.1											
333	Gibson, Fort.	35 50	95 20	540	52.2	51.6	25.9	28.9	35.5	38.8															
334	Reno, Fort.	35 28	98 03																						
335	Sill, Fort.	34 40	98 23	1,200																					
336	Towson, Fort.	34 01	95 12	300																					
337	Washita, Fort.	34 14	96 38	645	31.7	47.1	30.6	43.3	21.9	34.9	29.1	33.2													
Iowa.																									
338	Afton	41 06	94 10	1,223																					
339	Albion	42 08	93 00																						
340	Algona	43 15	94 13	1,500																					
341	Amama	41 47	91 55																						
342	Ames	42 03	93 38	1,000																					
343	Bancroft	43 20	94 15	1,170																					
344	Brookville	41 04	91 55	950																					
345	Bush Creek	42 44	91 41																						
346	Burlington	40 49	91 07	600																					
347	Cedar Rapids	41 58	91 40	768																					
348	Charles City	43 05	92 43	1,095																					
349	Clermont	42 58	91 38	869																					
350	Clinton	41 50	90 10	630																					
351	Columbus City	41 14	91 22																						
352	Concord	43 05	93 36																						
353	Council Bluffs	41 16	95 50	1,000																					
354	Cresco	43 22	92 07	1,855																					
355	Davenport	41 30	90 38	615																					
356	Decorah	43 17	91 47	875																					
357	Denmark	40 44	91 19																						
358	Des Moines	41 35	93 37	805																					
359	Dodge, Fort.	42 31	94 12	880																					
360	Dubuque	42 30	90 44	665																					
361	Dysart	42 10	92 20	968																					
362	Elkader	42 50	91 25																						
363	Fairfield	41 01	91 57	940																					
364	Garden Grove	40 50	93 34																						
365	Grand Junction	42 02	94 15	1,045																					
366	Grant City	42 15	94 53	1,200																					
367	Hamlin	41 45	94 50																						
368	Harvard	40 47	93 18																						
369	Hopkinton	42 22	91 20																						
370	Ida Grove	42 24	95 30	1,229																					
371	Independence	42 29	91 57	850																					



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[illegible]

[illegible]

## 43

1869	1870	Pentad mean.	1871	1872	1873	1874	1875	Pentad mean.	1876	1877	1878	1879	1880	Pentad mean.	1881	1882	1883	1884	1885	Pentad mean.	1886	1887	1888	1889	1890	Pentad mean.	1891	Number.
47.0	38.0		41.1	29.8	37.0	34.9	52.6	39.1	42.7	48.5																	401	
40.6	35.8	44.4	40.3	33.9	36.6	30.5																					402	
							10.8		39.8	48.9	40.7	36.4	24.4	38.0	33.7	13.1	28.4	30.4	23.9	25.9	19.3	15.8	23.0	19.1	11.6	17.8	32.5	403
									15.5	28.0	18.0	15.5	18.0	19.0	22.7	23.3	31.4	28.9	52.8	26.4	26.4	26.1	13.7	29.8	13.5	21.9	43.8	404
											25.5	24.3	22.1					44.6	58.4	32.7	26.9	26.1	34.8	36.2	22.9	30.7	26.8	405
												33.1	24.8		35.2	30.2	35.2	32.5	36.7	34.0	20.3	29.3	33.6	36.0		35.1	406	
21.1	17.8		30.5	15.3	22.7	37.2	32.0	27.5	36.9	30.5	36.1										30.6	22.7	18.9		13.3		32.5	407
	39.2		31.5	44.0	31.3	32.2	31.6	34.1	38.7	46.8	43.2	33.1	27.2	37.1	25.9	42.1												410
				33.4	35.0	31.5	36.9	18.4	38.7	46.8	43.2	33.0	26.6	37.1	55.0	34.0	34.3	43.9	44.4	42.3	29.5	31.7	40.8	44.6	30.7	35.5	30.4	411
38.5	31.5		33.5	32.6	33.6	28.4	28.7	15.9	31.3	44.2	41.1	38.5	32.5	37.8	33.4	27.4	40.7	43.6	36.9	36.4	24.2	33.8	44.2	45.3	36.4	36.8	43.4	412
35.4	40.9		40.8	43.0	35.3	33.8	31.1	36.9	44.5	52.0	35.3	41.4	37.0	42.0	38.8	41.9	44.6	43.7	39.2	22.3	37.1	47.2	41.0	26.4	35.2	37.8	413	
42.4			38.2	41.0	32.0	27.6	41.9	36.1	34.6																			414
28.2	22.0		30.0	37.4	32.8	21.6	18.3	28.0	45.7	43.9	39.2		29.2		29.1	27.8	36.3	37.2	24.0	30.9	30.9	30.4	31.3	31.0	22.8	29.3	27.7	415
31.9	24.0	27.7	32.2	31.5	24.3	15.8	15.4	23.8	37.5	32.6	28.8	33.0	30.3	22.4	28.9	21.4	22.0	28.4	24.4	24.4	10.5	19.1	15.9	19.3	13.6	15.7	24.5	416
																		24.4	24.4	24.4	18.0	24.4	24.1	30.3	22.0	23.8	26.0	418
																					25.9	21.6	28.5	39.0	22.2	27.4	32.4	420
																					24.8	27.8	18.8	32.7	18.1	24.4	28.2	421
												34.5	35.3		44.6	24.5	38.1	42.7	34.9	33.0	28.5	36.0	33.9	38.9	28.2	31.9		423
	15.0				6.8	13.6			17.1	14.3	19.9	16.6	34.0	20.4	39.5	36.0	40.3	29.1	35.2	36.0	28.9	28.8</						

TABLE I.—Annual

Number.	State and station.	Lat. N.	Long. W.	Elevation.	1851	1852	1853	1854	1855	Pentad mean.	1856	1857	1858	1859	1860	Pentad mean.	1861	1862	1863	1864	1865	Pentad mean.	1866	1867	1868
Massachusetts—Con.																									
500	Waltham	42 25	71 16	180	40.7	42.2	45.1	40.9	40.6	41.9	47.2	44.1	37.4	48.4	46.1	44.6	36.4	46.4	53.6	36.5	35.6	41.7	43.6	41.5	44.5
501	Taunton	41 54	71 05	30																					
502	Thatchers Island	43 38	70 34	48																					
503	Westborough	42 16	71 33	298																					
504	Westfield	42 05	72 45	180					48.6		47.6	53.4	43.1	54.2			52.4	49.7	59.8	34.1	43.3	47.9			
505	Williamstown	42 42	73 13	686					54.4						40.6		44.4			31.4			35.9	34.1	32.9
506	Woods Holl	41 33	70 40	35																					
507	Worcester	42 16	71 49	483	43.9	61.9	59.6	59.1	58.6	56.6	46.9	53.2	41.0	48.9	48.7	47.7	42.2	44.0			38.6		43.4	49.1	45.8
Michigan.																									
508	Adrian	41 58	84 11	1,240																					
509	Alma	43 24	84 37																						
510	Alpena	45 05	83 30	609																					
511	Brady, Fort	46 31	84 43	600	45.2		21.7	29.1																	
512	Coldwater	41 58	85 00	998																					
513	Detroit	42 20	83 03	661				46.6	71.3					29.0	28.2		38.4	31.4	30.5	25.8	21.1	29.4	31.6		
514	Escanaba	45 45	87 01	612					71.3								38.4	31.4	30.5	25.8	21.1	29.4	31.6		
515	Grand Haven	43 05	86 13	620																					
516	Grand Rapids	42 57	85 40	760																					
517	Gratiot, Fort	42 59	82 25	508	31.8				51.9			36.7	35.6												
518	Harrisville	44 40	83 15	616																					
519	Kalamazoo	42 20	85 38	900																					
520	Lansing	42 44	84 26	841																					
521	Litchfield Village	42 05	84 46	1,040																					
522	Mackinac, Fort	45 51	84 40	728	11.7		37.1	35.5	33.8					22.4	21.6							39.5	24.5	27.0	37.6
523	Mackinaw City	45 50	84 40	596																					
524	Marquette	46 34	87 24	673									38.5	42.6	25.7		39.1	30.2	35.5	22.4	26.0	30.6	29.8		
525	Marshall	42 17	84 50	883																					
526	Mendon	42 02	85 29	872																					
527	Monroe City	41 56	83 27	584																					
528	Mottville	41 45	85 42	920																					
529	Northport	45 08	85 40	592																					
530	Ontonagon	46 53	80 31	630																					
531	Port Huron	43 00	82 36	633										1	21.2		34.5	22.1	23.9	22.0					
532	Reed City	43 44	85 28	1,016																					
533	Tawas City	44 16	83 31	821																					
534	Tecumseh	42 01	83 57	821										20.5	17.4		21.4	24.6	31.0	19.1	27.2	24.7	19.6		
535	Thornville	42 56	83 14	975																					
536	Thunder Bay Isl'd	44 59	83 25	575																					
537	Traverse City	44 45	85 40	598																					
Minnesota.																									
538	Beaver Bay	47 12	91 18	657																					
539	Breckenridge	46 18	96 45	968																					
540	Duluth	46 48	92 06	644																					
541	Mankato	44 08	94 02	778																					
542	Minneapolis	44 58	93 15	856																					
543	Moorhead	46 52	96 44	923																					
544	Morris	45 30	95 58	1,131																					
545	New Ulm	44 19	94 30	821																					
546	Northfield	44 28	93 08	932																					
547	Pine River Dam	46 38	94 08																						
548	Red Wing	44 33	92 30	800																					
549	Ripley, Fort	46 10	94 24	1,130	35.3	34.6	26.1	18.5	23.7	27.6	25.4		19.9	26.0	30.6		32.4	14.4	17.2	12.4	25.6	20.4		30.4	32.3
550	Ridgely, Fort	44 28	94 40	1,230				25.2	34.7		23.1	38.2	22.7	32.8	16.9	26.7	23.1	30.2	18.1	14.3	34.9	24.1			
551	St. Paul	44 58	93 03	811											34.2		30.5	34.5	15.7	14.9	38.1	26.7	27.9	33.6	30.7
552	St. Vincent	48 56	97 14	804																					
553	Snelling, Fort	44 53	93 10	820	23.4	15.0	20.4	26.5	24.9	22.0	22.7	32.1													28.0
Mississippi.																									
554	Artonish	31 10	91 35																						
555	Brookhaven	31 34	90 29	430																					
556	Canton	32 36	90 00	228																					
557	Church Hill	31 42	91 16	250	44.2	37.1	52.8	49.8																	
558	Columbus	33 31	88 28	227							55.1	53.9	57.2	61.2	48.2	55.1	59.2	45.3	68.3	48.7	54.6	55.2	61.1	51.9	55.2
559	Fayette	31 43	91 07	282																					
560	Grenada	33 48	89 50	187																					
561	Natchez	31 34	91 27	264																					
562	Oxford	34 25	89 20	450																					
563	Starkville	33 30	88 48	369																					
564	Vicksburg	32 22	90 53	244	43.3	43.4	51.8																		
565	Water Valley	34 10	89 30																						
566	Yazoo	32 49	90 26	116																					
Missouri.																									
567	Big Creek	38 56	91 00																						
568	Bolivar	37 35	93 30	1,000																					
569	Boonville	38 56	92																						



1869	1870	Pentad mean.	1871	1872	1873	1874	1875	Pentad mean.	1876	1877	1878	1879	1880	Pentad mean.	1881	1882	1883	1884	1885	Pentad mean.	1886	1887	1888	1889	1890	Pentad mean.	1891	Number.
47.3	39.4	43.3	36.9	45.7	42.5	32.4	40.3	39.6	47.5	42.7	55.3	32.0	31.8	41.9	37.7	32.9	29.3	42.7	42.3	37.0	47.6	46.0	57.6	53.1	54.6	51.8	45.6	500
47.3	39.4	43.3	36.9	45.7	42.5	32.4	40.3	39.6	47.5	42.7	55.3	32.0	31.8	41.9	37.7	32.9	29.3	42.7	42.3	37.0	47.6	46.0	57.6	53.1	54.6	51.8	45.6	501
47.3	39.4	43.3	36.9	45.7	42.5	32.4	40.3	39.6	47.5	42.7	55.3	32.0	31.8	41.9	37.7	32.9	29.3	42.7	42.3	37.0	47.6	46.0	57.6	53.1	54.6	51.8	45.6	502
47.3	39.4	43.3	36.9	45.7	42.5	32.4	40.3	39.6	47.5	42.7	55.3	32.0	31.8	41.9	37.7	32.9	29.3	42.7	42.3	37.0	47.6	46.0	57.6	53.1	54.6	51.8	45.6	503
47.3	39.4	43.3	36.9	45.7	42.5	32.4	40.3	39.6	47.5	42.7	55.3	32.0	31.8	41.9	37.7	32.9	29.3	42.7	42.3	37.0	47.6	46.0	57.6	53.1	54.6	51.8	45.6	504
47.3	39.4	43.3	36.9	45.7	42.5	32.4	40.3	39.6	47.5	42.7	55.3	32.0	31.8	41.9	37.7	32.9	29.3	42.7	42.3	37.0	47.6	46.0	57.6	53.1	54.6	51.8	45.6	505
47.3	39.4	43.3	36.9	45.7	42.5	32.4	40.3	39.6	47.5	42.7	55.3	32.0	31.8	41.9	37.7	32.9	29.3	42.7	42.3	37.0	47.6	46.0	57.6	53.1	54.6	51.8	45.6	506
47.3	39.4	43.3	36.9	45.7	42.5	32.4	40.3	39.6	47.5	42.7	55.3	32.0	31.8	41.9	37.7	32.9	29.3	42.7	42.3	37.0	47.6	46.0	57.6	53.1	54.6	51.8	45.6	507
47.3	39.4	43.3	36.9	45.7	42.5	32.4	40.3	39.6	47.5	42.7	55.3	32.0	31.8	41.9	37.7	32.9	29.3	42.7	42.3	37.0	47.6	46.0	57.6	53.1	54.6	51.8	45.6	508
47.3	39.4	43.3	36.9	45.7	42.5	32.4	40.3	39.6	47.5	42.7	55.3	32.0	31.8	41.9	37.7	32.9	29.3	42.7	42.3	37.0	47.6	46.0	57.6	53.1	54.6	51.8	45.6	509
47.3	39.4	43.3	36.9	45.7	42.5	32.4	40.3	39.6	47.5	42.7	55.3	32.0	31.8	41.9	37.7	32.9	29.3	42.7	42.3	37.0	47.6	46.0	57.6	53.1	54.6	51.8	45.6	510
47.3	39.4	43.3	36.9	45.7	42.5	32.4	40.3	39.6	47.5	42.7	55.3	32.0	31.8	41.9	37.7	32.9	29.3	42.7	42.3	37.0	47.6	46.0	57.6	53.1	54.6	51.8	45.6	511
47.3	39.4	43.3	36.9	45.7	42.5	32.4	40.3	39.6	47.5	42.7	55.3	32.0	31.8	41.9	37.7	32.9	29.3	42.7	42.3	37.0	47.6	46.0	57.6	53.1	54.6	51.8	45.6	512
47.3	39.4	43.3	36.9	45.7	42.5	32.4	40.3	39.6	47.5	42.7	55.3	32.0	31.8	41.9	37.7	32.9	29.3	42.7	42.3	37.0	47.6	46.0	57.6	53.1	54.6	51.8	45.6	513
47.3	39.4	43.3	36.9	45.7	42.5	32.4	40.3	39.6	47.5	42.7	55.3	32.0	31.8	41.9	37													

# RAINFALL AND SNOW OF THE UNITED STATES.

TABLE I.—*Annual*

[illegible]

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[illegible]

TABLE I.—Annual

Number.	State and station.	Lat. N.	Long. W.	Elevation.	1851	1852	1853	1854	1855	Pentad mean.	1856	1857	1858	1859	1860	Pentad mean.	1861	1862	1863	1864	1865	Pentad mean.	1866	1867	1868
	<i>Connecticut—Cont'd.</i>	0	0	<i>Feet.</i>																					
203	Southington	41 35	72 51	294																					
204	Trumbull, Fort	41 20	72 08	23															23.5	20.3			44.3	49.1	54.6
205	Wallingford	41 27	72 40	133									41.7	56.9	41.9		48.8				52.6		44.3	51.1	51.9
	<i>Delaware.</i>																								
206	Delaware, Fort	39 35	75 34	10					39.5		31.4	26.0	17.1							38.0	50.9				
207	Del. Breakwater	38 48	75 10	20																					
208	Dover	39 10	75 30	40																					
209	Milford	38 45	75 25	20																					
	<i>District of Columbia.</i>																								
210	Washington	38 54	77 03	115		40.4	33.5	31.7	29.7		33.4	41.3	39.5	42.4	37.5	38.8	43.5	39.1	45.2	36.4	48.7	42.6	49.5	57.8	47.1
	<i>Florida.</i>																								
211	Alva	26 45	81 33	15																					
212	Archer	29 30	82 30	77																					
213	Biscayne	25 53	80 07	12																					
214	Cedar Keys	29 08	83 02	22		55.6	54.0	39.5	34.3		34.5		54.3	51.6											
215	Daytona	29 12	81 01	10																					
216	Jacksonville	30 20	81 39	43																					
217	Jefferson, Fort	24 38	82 62	11													23.7	40.4	50.7	30.9	40.4	37.2		88.1	28.2
218	Jupiter	26 57	80 07																						
219	Key West	24 34	81 49	27	53.8	46.4	45.6	44.6	44.6	47.0	40.3	38.8	35.7	37.7	34.6	36.2	30.6	33.8	30.6	43.9	41.3	36.0			
220	Lake City	30 13	82 40	216										79.6	75.5										
221	Manatee	27 27	82 35	16																					
222	Mayport	30 24	81 25	15																					
223	Meade, Fort	27 46	81 50	80		46.4	*18.3	52.2																	
224	Merritts Island	28 22	80 41	22																					
225	Myers, Fort	26 38	81 46	50	61.7	74.1	82.8	44.8	54.8	63.6	48.9	40.1													
226	Pensacola	30 25	87 13	30																					
227	Peirce, Fort	27 30	80 20	30			96.5	46.8			58.1	54.4													
228	Punta Rasa	26 30	82 00	13																					
229	St. Marks	30 10	84 12	15																					
230	Sanford	28 48	81 23	25																					
231	Tallahassee	30 27	84 16	200																					
232	Tarpon Springs†	28 10	82 45																						
233	Titusville	28 34	80 51	9																					
234	Brooke, Fort	28 0	82 28	20		69.3	45.0	77.3	40.7		55.7	36.0													
235	Barrancas, Fort†	30 21	87 18	20	46.5		56.2	50.9	77.5		53.6	67.8			70.0										
236	St. Augustine	29 54	81 18	25	33.9							40.8	49.9	47.5											
	<i>Georgia.</i>																								
237	Americus	32 03	84 14	362																					
238	Atlanta	33 45	84 23	1,050											64.5										
239	Athens	33 58	83 23	850																					
240	Augusta	33 28	81 54	183																					
241	Brunswick	31 10	81 27	14																					
242	Carrollton	33 36	85 04																						
243	Forsyth (near)	33 00	83 55	735																					
244	Gainesville	34 16	83 47	1,227																					
245	La Grange	33 02	85 01	742																					
246	Milledgeville	33 05	83 14	310																					
247	Nashville	31 15	83 19																						
248	Quitman (near)	30 45	83 50	170																					
249	Rabun Gap	34 59	83 22	1,900																					
250	Rome	34 16	85 08	627																					
251	Savannah	32 05	81 05	87	43.9	54.8	47.0	43.1	38.6	45.5	45.4	33.4	53.3												
252	Sparta	33 15	82 54	567			48.8	44.5	51.4		51.9	39.5	63.1	63.7	60.2	55.7									
253	St. Marys	30 44	81 34	25																					
254	Thomson	33 29	82 25	517																					
255	Tybee Island	32 00	80 52	29																					
256	Walthourville	31 44	81 38	92																					
257	Whitemarsh	32 03	81 02	20	30.0	49.8	45.7	41.3	37.4	40.8	38.7	30.8	52.5	45.7											
	<i>Idaho.</i>																								
258	Boise City	43 34	116 08	2,768																					
259	Boise, Fort	43 34	116 08	2,880																	11.6				6.7
260	Eagle Rock	43 30	116 05	4,781																					
261	Lewiston	46 23	117 00																						
262	Lapwai, Fort	46 18	116 54	2,000																	14.1				
263	Sherman, Fort	47 42	116 38	2,198																					
	<i>Indiana.</i>																								
264	Angola	41 36	85 00	1,052																					
265	Aurora	39 04	84 55	509																			40.8	36.2	44.6
266	Butlerville	39 03	85 33	767																					
267	Columbia City	41 09	85 30	863																					
268	Columbus	39 13	85 56	632																					
269	Connersville	39 40	85 03	844																					
270	Degonia Springs	38 06	87 12	445																					
271	Evansville	38 02	87 29	390																					
272	Farmland	40 11	85 10	1,040																					
273	Indianapolis	39 46	86 10	753																					
274	Jeffersonville	38 18	85 42	427																					
275	Laconia	38 05	86 07	530																			43.2	45.1	45.1
276	Lafayette	40 28	86 54	667																					
277	Logansport	40 45	86 22	600																					
278	Mauzy	39 37	85 23																						
279	Marengo	38 24	86 24	363																					
280	Merom	39 05	87 40	560																					
281	New Harmony	38 10	87 54	350				35.7	48.0																

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TABLE I.—Annual

Number.	State and station.	Lat. N.	Long. W.	Elevation.	1851	1852	1853	1854	1855	Pentad mean.	1856	1857	1858	1859	1860	Pentad mean.	1861	1862	1863	1864	1865	Pentad mean.	1866	1867	1868
Illinois—Cont'd.																									
300	Elmira	41 10	89 49	505																	38.0	34.4	24.4	34.8	
301	Geneseo	41 27	89 06																						
302	Goleconda	37 23	88 30																				32.9	30.4	
303	Grand Tower	37 39	89 30	352																					
304	Griggsville	39 43	90 44	650																					
305	Galesburg	40 56	90 22	786																					
306	Greenville	38 50	89 25	555														42.9		32.8	36.2	32.0	23.2		
307	Havana	40 18	89 05	475																					
308	Hennepin	41 16	89 21																						
309	Irishtown	38 40	89 30																						
310	Louisville	38 46	88 30	500																					
311	McLeansboro	38 07	88 35	462																					
312	Manchester	39 31	90 34	683					48.1		31.0	33.7	49.4	42.4			30.0	39.9		27.3			43.7	29.0	37.9
313	Mattoon	39 29	88 24	724																					
314	Mount Carmel	38 27	87 49	424																					
315	Marengo	42 15	88 37	842	56.9	42.1	45.2				31.4	37.9	50.2	29.9	29.8	35.8	36.7	41.1	25.6	24.0	37.1	32.9	39.8	27.9	44.8
316	Mt. Sterling	39 58	90 47	525																					
317	Oswego	41 40	88 22	670																					
318	Ottawa	41 22	88 48	500							29.5	34.7	47.2	27.8	30.8	34.0	38.9	55.7	36.7	29.4	36.6	39.5	32.8	28.2	33.5
319	Palestine	39 05	87 45	500																					
320	Pana	39 25	89 07	735																					
321	Philo	39 59	88 08	771																					
322	Peoria	40 42	89 36	475							26.0	30.6	53.4	30.1	34.2	34.9	30.3	48.3	32.1	31.0	37.1	35.8	35.7	24.6	35.8
323	Pontiac	40 54	88 40	600																					
324	Rockford	42 15	89 05	732																					
325	Rock Isl'd Arsenal	41 32	90 38	528																					
326	Sandwich	41 31	88 32	690																					
327	Springfield	39 48	89 39	644											50.2		68.6	70.4	50.4	38.3	34.3	52.4	36.2	29.2	34.3
328	Sycamore	42 00	88 42	800																					
329	Winnebago	42 17	89 12	900									45.2	26.5	32.9		44.6			29.0	44.8		38.9	26.6	35.2
330	Watsela	40 48	87 45	640																					
331	Wyanet	41 30	89 45	750																	50.1		34.4	27.9	36.2
Indian Territory.																									
332	Arbuckle, Fort	34 50	97 22	1,000	24.4	46.0	26.7	28.2	29.8	31.0	42.1	47.4		28.1											
333	Gibson, Fort	35 50	97 20	540	52.2	51.6	25.9	28.9	35.5	38.8															
334	Reno, Fort	35 28	98 03																						
335	Sill, Fort	34 40	98 23	1,200																					
336	Towson, Fort	34 01	95 12	300																					
337	Washita, Fort	34 14	96 38	645	31.7	47.1	30.6	43.3	21.9	34.9	29.1	33.2													
Iowa.																									
338	Afton	41 06	94 10	1,223																					
339	Albion	42 08	93 00																						
340	Algona	43 15	94 13	1,500																					
341	Amama	41 47	91 55																						
342	Ames	42 03	93 38	1,000																					
343	Bancroft	43 20	94 15	1,170																					
344	Brookville	41 04	91 55	950																					
345	Bush Creek	42 44	91 41									43.7			40.0	27.0		39.8	33.5						
346	Burlington	40 49	91 07	600																					
347	Cedar Rapids	41 58	91 40	768																					
348	Charles City	43 05	92 43	1,005																					
349	Clermont	42 58	91 38	869																					
350	Clinton	41 50	90 10	630																					
351	Columbus City	41 14	91 22																						
352	Concord	43 06	93 36																						
353	Council Bluffs	41 16	95 50	1,000																					
354	Cresco	43 22	92 07	1,855																					
355	Davenport	41 30	90 38	615																					
356	Decorah	43 17	91 47	875																					
357	Denmark	40 44	91 19																						
358	Des Moines	41 35	93 37	805																					
359	Dodge, Fort	42 31	94 12	880		26.0																			
360	Dubuque	42 30	90 44	665				27.7	29.1				47.3		26.9		38.5	34.9	33.9	25.0	36.2	33.7	36.4	34.8	30.3
361	Dysart	42 10	92 20	968																					
362	Elkader	42 50	91 25																						
363	Fairfield	41 01	91 57	940																					
364	Garden Grove	40 50	93 34																						
365	Grand Junction	42 02	94 15	1,045																					
366	Grant City	42 15	94 53	1,200																					
367	Hamlin	41 45	94 50																						
368	Harvard	40 47	93 18																						
369	Hopkinton	42 22	91 20																						
370	Ida Grove	42 24	95 30	1,229																					
371	Independence	42 29	91 57	850																					
372	Iowa City	41 37	91 39	621									43												

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# RAINFALL AND SNOW OF THE UNITED STATES.

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1869	1870	Pentad mean.	1871	1872	1873	1874	1875	Pentad mean.	1876	1877	1878	1879	1880	Pentad mean.	1881	1882	1883	1884	1885	Pentad mean.	1886	1887	1888	1889	1890	Pentad mean.	1891	Number.
47.3	39.4	43.3	35.9	45.7	42.5	32.4	40.3	39.6	47.5	42.7	55.3	32.0	31.8	41.9	37.7	32.9	29.3	42.7	42.3	37.0	47.6	46.0	57.6	53.1	54.6	51.8	45.6	500
							43.4		43.7	45.9	42.4	42.4	49.3	44.7	41.0	37.4	34.8	51.1	35.9	40.0	49.4	51.9	59.9	58.0	54.1	54.7	47.8	501
							36.6		47.6	42.6	58.3	46.0	46.1	48.1	64.3	45.6	40.2	50.7	43.3	41.5	45.6	42.9	54.5	46.4	47.5	47.4	41.1	502
	44.9		35.4						44.5	44.1	55.4	41.1	37.3	44.5	43.8	38.9	33.5	48.2	43.3	41.5	45.6	42.9	54.5	46.4	47.5	47.4	41.1	503
																												504
																												505
50.2	42.2	45.9	46.0																									506
																												507
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# RAINFALL AND SNOW OF THE UNITED STATES.

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Number.	State and station.	Lat. N.	Long. W.	Elevation.	1851	1852	1853	1854	1855	Pentad mean.	1856	1857	1858	1859	1860	Pentad mean.	1861	1862	1863	1864	1865	Pentad mean.	1866	1867	1868
<i>Montana—Cont'd.</i>																									
599	Keogh, Fort.....	46 22	105 56	2,372																					
600	Maginnis, Fort.....	47 10	109 06	4,310																					
601	Missoula, Fort.....	46 54	114 10	3,375																					
602	Poplar River.....	48 08	105 10	2,002																					
603	Shaw, Fort.....	47 30	111 48	3,550																					10.1
604	Virginia City.....	45 10	112 00	5,600																					
<i>Nebraska.</i>																									
605	Central City.....	41 14	98 15																						
606	Clear Creek.....	41 16	96 41	1,150																					
607	Cornlea.....	41 45	97 30	1,742																					
608	Crete.....	40 36	95 55	1,364																					
609	DeSoto.....	41 28	96 03	1,100																					
610	Fairbury.....	40 08	97 08	1,318																					31.1
611	Fremont.....	41 25	95 27	1,204																					
612	Forest Home.....	40 06	99 40																						
613	Genoa.....	41 25	97 40	1,585																					
614	Hartsuff, Fort.....	41 43	99 00																						
615	Hay Springs.....	42 40	102 38	3,834																					
616	Hebron.....	40 09	97 34	1,421																					
617	Howard.....	40 30	98 56																						
618	Marquette.....	40 58	98 00	1,830																					
619	McPherson, Fort..	41 02	100 31																						
620	Minden.....	40 30	98 56	2,190																					23.9
621	Nebraska City.....	40 40	95 49	1,005																					
622	Niobrara, Fort.....	42 53	100 25	2,483																					
623	North Platte.....	41 16	95 45	2,841																					
624	Omaha.....	41 16	95 56	1,113																					
625	Ravenna.....	41 02	98 54	2,008																					
626	Robinson, Fort.....	42 50	103 24																						
627	Sidney Barracks..	41 09	102 59	4,096																					
628	Syracuse.....	40 39	96 09	1,059																					
629	Tecumseh.....	40 21	95 11	1,130																					
630	West Hill.....	41 33	97 49																						
631	Valentine.....	42 54	100 25	2,579																					
632	Kearney, Fort....	40 38	99 01	2,360	26.5	20.5	30.0	26.8	25.1	25.6	29.0	28.7	26.1	16.2	16.9	23.4	19.4	22.1							
<i>Nevada.</i>																									
633	Battle Mountain..	40 38	116 52	5,311																					
634	Beowawe.....	40 34	116 30	4,695																					
635	Browns.....	40 01	118 41	3,929																					
636	Carlin.....	40 43	116 07	4,897																					
637	Carson City.....	39 08	119 47	4,628																					
638	Cedar Pass.....	41 08	114 50																						
639	Elko.....	40 50	115 45	5,065																					
640	Golconda.....	40 57	117 34	4,392																					
641	Halleck.....	40 58	115 27	5,229																					
642	Hot Springs.....	39 49	119 02	4,072																					
643	Humboldt.....	40 38	118 14	4,236																					
644	Iron Point.....	40 58	117 21	4,375																					
645	McDermitt Camp..	41 58	117 39	4,700																					
646	Otego.....	41 09	114 36																						13.5
647	Palisade.....	40 39	116 12	4,840																					
648	Pioche.....	37 56	114 26	6,110																					
649	Reno.....	39 33	119 47	4,497																					
650	Tecoma.....	41 18	114 07	4,812																					
651	Toano.....	41 07	114 26	5,957																					
652	Wadsworth.....	39 38	119 19	4,077																					
653	Wells.....	41 07	114 56	5,628																					
654	Winnemucca.....	40 53	117 50	4,358																					
<i>New Hampshire.</i>																									
655	Antrim.....	43 02	71 55																						
656	Ashland.....	43 40	71 38																						
657	Belmont.....	43 27	71 30																						
658	Berlin Mills.....	44 16	71 16	1,011																					
659	Bristol.....	43 34	71 44																						
660	Claremont.....	43 24	72 21	539																					
661	Concord.....	43 12	71 33	252			45.0				37.0	39.6	40.2	35.2	36.1	37.8	46.7	38.6	44.3	43.0	45.4	43.6	47.6	43.1	37.0
662	Constitution, Fort.	43 04	70 57	40	45.4	42.5											42.6	47.6	54.4	38.7	39.2	44.5	37.2	40.1	41.1
663	Contoocook.....	43 15	71 40	450																					
664	Dunbarton.....	43 06	71 35	750																					
665	Hanover.....	43 42	72 17	530	41.6	35.9	37.5	34.6	40.3	38.0															
666	Lake Village.....	43 35	71 30									48.3	41.8	44.7									39.7		
667	Manchester.....	42 58	71 28	180																					
668	Mount Washington	44 16	71 18	6,279																					
669	Nashua.....	42 46	71 29	120																					
670	Stratford.....	44 40	71 39	1,000										35.3	30.8		45.2	40.1	44.4	41.8	38.4	42.0	50.5	41.1	37.7
671	Walpole.....	43 05	72 27	277																					
672	Weirs Bridge.....	43 36	71 29																						
673	West Milan.....	44 35	71 15	996																					
674	Wolfboro.....	43 35	71 12																						
675	Woodstock.....	43 57	71 42	749																					
<i>New Jersey.</i>																									
676	Atlantic City.....	39 22	74 25	13																					
677	Barnegat City.....	39 46	74 06	22																					
678	Beverly.....	40 05	74 59	30																					
679	Bloomfield.....	40 48	74 12	120	36.0	40.6	49.7	37.7	33.8	39.4	27.3	72.2	36.0					43.0							
680	Cape May.....	38 56	74 58	27																					
681	Chester.....	39 57	74 57	15																					
682	Egg Harbor City..	39 30	74 37	70																42.3	46.8		40.2	45.9	48.
683	Freehold.....	40 15	74 16	167																					
684	Greenwich.....	39 24	75 20	30																					
685	Haddonfield.....	39 53	75 02	50																					
686	Lambertville.....	40 23	74 57	72	32.5	45.3	42.8</																		

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Number.	State and station.	Lat. N.	Long. W.	Elevation.	1851	1852	1853	1854	1855	Pentad mean.	1856	1857	1858	1859	1860	Pentad mean.	1861	1862	1863	1864	1865	Pentad mean.	1866	1867	1868
N. Mexico—Cont'd.																									
698	Bayard, Fort	32 46	108 30	4,450																				13.9	15.3
699	Burgwin Camp	36 30	105 40	7,900					7.4		3.9	7.9	11.9	12.8											
700	Craig, Fort	33 38	107 00	4,619					7.9		12.6	13.5	4.5	24.6	6.2	12.3	10.7	20.8							
701	Denning	32 18	107 48	4,327																					17.5
702	Fillmore, Fort	32 12	106 40	4,077		12.6	8.9	6.2	7.4		9.2	10.4	5.1	5.6	3.7	6.8									
703	Gallinas Spring	35 15	104 31	4,800																					
704	La Mesilla	32 17	106 48	4,124																					
705	Lava	33 33	105 59	4,703																					
706	Lordsburgh	32 20	108 41	4,247																					
707	Santa Fe	35 42	106 01	7,026			21.8	24.9	24.3		23.2	8.5	11.2	9.5	8.9	12.3	15.8				23.1			8.9	
708	Selden Fort	32 27	106 53	3,500														7.8						9.9	9.9
709	Silver City	32 46	108 34	5,796																					
710	Stanton, Fort	33 29	105 38	7,500							16.8	28.8	18.7	23.7	14.7	20.5									
711	Thorn, Fort	33 49	107 10	7,500				14.6	13.4		13.6	20.5	10.5												
712	Union, Fort	35 54	104 57	6,670		26.5	13.5	14.5	18.6		20.2	20.9	22.8	24.5	16.5	21.0	47.0	24.0							
713	Wingate, Fort	35 29	107 45	6,982																	9.2		23.4	14.3	
New York																									
714	Albany	42 39	73 45	85	34.6	32.0	45.9	34.1	42.4	37.8	39.1	41.6	34.0	31.9	32.4	35.8	36.1	37.8	43.2	28.0	36.4	36.3	34.3	38.2	41.7
715	Argyle	43 18	73 20	290																					
716	Auburn	40 55	76 28	650																					
717	Brookhaven	40 47	72 53	13																					
718	Buffalo	42 53	78 53	66									41.9	35.7	32.5		41.1	37.9	31.8	43.5	35.2	37.9	56.5	55.0	59.4
719	Cazenovia	42 55	75 46	1,260										41.7			43.6								38.4
720	Charlotte	43 15	77 37	273																					
721	Cooperstown	42 42	74 57	350				37.7	48.1		34.4	51.9	45.5	41.4	33.7	41.4	40.7	38.0	47.0	35.0	31.6	30.9	32.3	36.4	37.3
722	Dopauville	44 06	76 06	830																					



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1869	1870	Pentad mean.	1871	1872	1873	1874	1875	Pentad mean.	1876	1877	1878	1879	1880	Pentad mean.	1881	1882	1883	1884	1885	Pentad mean.	1886	1887	1888	1889	1890	Pentad mean.	1891	Number.
12.8	10.0	.....	5.7	13.6	12.1	20.3	19.7	14.3	18.9	13.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.6	13.6	13.5	7.2	16.0	12.2	10.5	668
11.2	9.0	.....	.....	.....	5.9	8.9	13.4	.....	.....	12.5	5.3	.....	.....	.....	.....	.....	.....	10.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	669
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8.5	7.8	6.6	.....	11.4	11.5	9.0	9.1	11.3	10.6	4.5	700
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8.2	7.3	6.9	.....	15.0	.....	.....	.....	12.0	.....	27.8	19.0	15.1	13.0	12.3	17.4	14.5	702
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	703
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	704
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	705
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	706
12.2	13.8	.....	12.2	9.6	9.8	19.9	19.0	14.1	15.0	13.0	19.5	11.5	9.9	13.8	22.3	11.6	6.4	12.3	9.4	.....	.....	7.8	15.6	9.3	.....	.....	.....	707
12.7	12.4	.....	6.9	6.3	3.4	6.3	6.0	5.8	9.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	4.1	.....	.....	10.8	10.3	12.9	9.5	5.6	.....	708
24.9	17.9	.....	21.2	22.8	.....	.....	.....	.....	.....	.....	.....	13.8	16.8	.....	30.8	19.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	709
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	710
19.2	16.7	.....	13.6	23.7	17.6	17.6	28.2	20.1	16.6	22.2	20.1	6.4	18.1	16.7	22.5	12.1	14.9	21.6	17.9	17.8	21.5	21.8	25.6	12.0	14.6	19.1	.....	711
.....	.....	.....	22.2	21.5	26.1	7.5	10.7	17.6	11.3	10.2	22.1	6.4	11.1	12.2	14.1	14.3	14.3	16.4	12.4	12.4	12.4	17.1	11.4	10.7	17.8	13.9	14.3	712
44.4	55.8	42.9	56.7	38.5	.....	38.0	38.3	36.2	38.2	36.2	49.3	38.6	32.7	39.0	36.4	33.9	39.4	38.8	34.4	36.6	34.1	39.7	44.7	39.4	44.9	40.6	41.5	714
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	715
71.4	41.8	56.8	46.2	40.6	45.4	39.9	47.1	43.8	44.6	40.2	41.5	40.2	.....	.....	27.7	39.3	.....	27.7	39.3	.....	48.0	36.3	44.3	.....	.....	.....	.....	717
43.8	42.3	39.9	30.7	31.1	44.6	39.3	31.5	33.6	39.4	34.6	60.3	30.4	39.3	40.8	36.0	33.8	38.0	37.1	52.4	39.5	44.8	31.6	33.9	40.2	46.6	39.4		

## RAINFALL AND SNOW OF THE UNITED STATES.

TABLE I.—Annual

Number.	State and station.	Lat. N.	Long. W.	Elevation.	1851	1852	1853	1854	1855	Pentad mean.	1856	1857	1858	1859	1860	Pentad mean.	1861	1862	1863	1864	1865	Pentad mean.	1866	1867	1868
Ohio—Cont'd.																									
798	Elk Run.....	40 47	80 45	1,152													35.4	30.2	34.2	33.6	40.7	34.8	46.6		
799	Garrettsville.....	41 18	81 05	1,020																					
800	Georgetown.....	38 52	83 47	940																					
801	Greenville.....	40 07	84 50	976																					
802	Hanging Rock.....	38 32	82 38	543																					
803	Hillsboro.....	39 10	83 27	1,150							23.6	41.1	47.2	51.8	30.3	38.8				35.3	48.2		46.6	34.6	49.6
804	Hudson.....	41 16	81 29	1,137										41.2			55.0	32.2					46.6	34.6	49.6
805	Jacksonboro.....	39 30	84 30	1,152																					
806	Kenton.....	40 40	83 33	1,562																				50.0	
807	Lima.....	40 40	84 05	881																					
808	Little Mountain.....	41 38	81 16	1,150																					
809	Logan.....	39 35	82 19	730																					
810	Margaretta.....	41 32	82 42	850													29.2	39.7	26.4	34.4	40.8	33.9	42.8	28.9	47.1
811	Marietta.....	39 28	81 26	580	34.9	46.6	37.0	38.7	45.9	40.6	32.5	40.7	61.9	48.8	40.0	44.8	46.3	42.7	36.9	40.9	49.0	43.2	47.3	46.7	
812	Marion.....	40 37	83 07	1,077																					
813	McConnelsville.....	39 50	81 40	704																					
814	Milnersville.....	40 10	81 29																		31.5		37.9		
815	Napoleon.....	41 22	84 07	682																					
816	New Lisbon.....	40 47	80 50	961																					
817	North Fairfield.....	41 16	82 36	660									42.4	40.2			35.2	28.9	31.2	30.0	41.4	33.3	47.1	37.1	32.6
818	North Lewisburg.....	40 12	83 32	1,030																				32.2	26.1
819	Oberlin.....	41 20	82 12	800				28.1	47.9		24.8														
820	Pomeroy.....	39 18	81 50	565																					
821	Portsmouth.....	38 42	82 53	537	29.1	41.2	28.8	31.4	48.9	35.9				46.3	33.8		42.0	40.1	37.0	35.7	54.1	42.0	44.8	45.3	45.0
822	Quaker City.....	39 38	81 16	1,200																					
823	Ruggles.....	41 04	82 25	1,100																					
824	Sandusky.....	41 25	82 40	629																					
825	Sidney.....	40 18	84 09	960																					
826	Steubenville.....	40 25	80 41	670	28.5	49.3	35.4	30.1	47.9	38.2	32.3	55.1	50.4	49.6	46.4	46.8	38.8	42.4	38.7	49.2	48.0	43.4	49.1	34.1	
827	Toledo.....	41 08	83 08	765																					
828	Upper Sandusky.....	40 44	83 16	880													41.0	45.0	33.9	37.1	39.8	39.3	40.8	31.3	42.3
829	Urbana.....	40 06	83 43	1,015				41.5	57.7		30.8	39.6	41.2	36.6											
830	Wauseon.....	41 36	84 07	767																					
831	Waynesville.....	41 23	81 12	1,205									49.1	56.2	56.8		46.7	45.5	44.6	53.5	56.3	49.3			
832	Westerville.....	40 04	82 46	850										45.4	45.1	37.4		31.0	43.4						
Oregon.																									
835	Albany.....	44 35	123 02	600																					
836	Astoria.....	46 11	123 48	38					79.2		59.0	79.8	63.4	82.1	70.6	71.0	92.9	61.4	94.2	75.6	85.1	81.8	100.2	91.3	57.7
837	Bandon.....	43 05	124 30	40																					
838	Camp Harney.....	43 00	119 00																						10.0
839	Camp Warner.....	42 28	119 42	5,730																					
840	Cascade Locks.....	45 40	121 50	150																					
841	Dalles, The.....	45 33	121 12	106																					
842	Dalles, Fort.....	45 33	120 50	350			14.5	12.4	11.9			29.2	43.7	36.0	21.4		29.0	16.3	14.0	13.9	23.2	19.3			
843	Eola.....	44 57	123 05	500																					
844	East Portland.....	45 31	122 27	30																					
845	Empire City.....	43 25	124 10																						
846	Hoskins, Fort.....	45 06	123 26									65.0	68.0	71.1	56.6		77.1	46.0	72.7						
847	Klamath, Fort.....	42 41	121 50	4,200																					
848	Portland.....	45 32	122 43	80																					
849	Roseburg.....	43 13	123 20	523																					
850	Stevens, Fort.....	46 12	123 57	6																				86.0	
851	Umatilla.....	45 55	119 20																						
852	Umpqua, Fort.....	43 42	124 10	8								63.0	73.1	69.1	55.7		89.5								
853	Yamhill, Fort.....	45 21	123 15									57.9	62.1	55.8	50.9		61.3	57.0	53.8	42.9	54.9	54.0			
Pennsylvania.																									
854	Allegheny Arsenal.....	40 40	80 00		29.6	41.4	33.6	26.6	43.5	34.9	26.5	38.9	36.3	37.2	35.8	34.9	38.5	29.3	31.6	46.7	50.7	38.4			
855	Altoona.....	40 32	78 24	1,208																			30.8		
856	Bethlehem.....	40 36	75 23	250																					
857	Brookville.....	41 12	79 08	1,235																					
858	Blooming Grove.....	41 23	75 09																					49.4	47.5
859	Brownsville.....	40 02	79 52																						
860	Canonsburg.....	40 17	80 11	935																					
861	Carlisle.....	40 12	77 14	500							24.6	40.8	34.9	40.5						38.7	44.0			29.7	34.9
862	Catawissa.....	40 58	76 30	478							26.0	43.2	33.6	40.5	42.7		43.4	47.9			43.2			52.3	76.9
863	Chambersburg.....	39 56	77 40	618																					
864	Clarion.....	41 14	79 24																						
865	Confluence.....	39 48	79 21	1,346																					
866	Chromedale.....																								



# RAINFALL AND SNOW OF THE UNITED STATES.

**precipitation—Continued.**

[illegible]

## RAINFALL AND SNOW OF THE UNITED STATES.

TABLE I.—Annual

Number.	State and station.	Lat. N.	Long. W.	Elevation.	1851	1852	1853	1854	1855	Pentad mean.	1856	1857	1858	1859	1860	Pentad mean.	1861	1862	1863	1864	1865	Pentad mean.	1866	1867	1868
Vermont—Cont'd.																									
997	Jacksonville.....	42 50	72 48	850	33.5	39.1	41.9	36.6	38.2	37.9	39.9	37.3	38.4	35.2	39.0	38.0	47.1	46.0	45.8	38.9	39.9	43.5	38.1	39.7	43.3
998	Lunenburg.....	44 28	71 41	398																35.6	35.3		37.0	36.3	32.6
999	Middlebury.....	44 02	73 10	750																					
1000	Newport.....	44 55	72 18	700																					
1001	Randolph.....	43 55	72 36	50																					
1002	Stratford.....	43 52	72 25	90																					
1003	Vernon.....	42 48	72 30	650																					
1004	West Charlotte.....	44 20	73 15																						
1005	Woodstock.....	43 36	72 31									45.4	35.7												
Virginia.																									
1006	Alto Vista.....	38 04	78 26	500																					
1007	Cape Henry.....	36 56	76 00	16																					
1008	Chincoteague.....	37 55	75 23	8																					
1009	Christiansburg.....	37 05	80 23	2,160																					
1010	Crichtons Store.....	36 40	77 46	500				44.3	41.0		36.5	34.2	32.2	30.7	35.6	33.8									
1011	Dale Enterprise.....	38 25	78 50	850																					
1012	Fort Monroe.....	37 00	76 19	8	26.7	27.2	26.7	19.3			40.4	42.8	37.1		40.1		47.1		29.8						44.9
1013	Hampton.....	37 02	76 20	5																					
1014	Lynchburg.....	37 25	79 09	658																					
1015	Marion.....	36 48	81 25	2,135																					
1016	Mount Solon.....	38 17	79 02	1,560																					
1017	Norfolk.....	31 51	76 17	69																					
1018	Prospect Hill Farm.....	37 25	75 52	40																					
1019	Powhatan Hill.....	38 13	77 12	200	26.8	37.6	28.9	30.0	30.3	30.7	29.3	32.2	31.3	34.4	33.7	32.2	44.9					36.6	43.1	30.3	
1020	Richmond.....	37 32	77 26	172	40.5	47.5																			
1021	Smithfield.....	36 57	76 38	100					41.7		48.6	47.1	44.8	52.5	50.5	49.7									
1022	Snowville.....	37 00	80 31	1,800																					102.9
1023	Woodlawn.....	38 40	77 10	150																					
1024	Wytheville.....	36 55	81 02	2,235											48.6		51.1	44.7							38.1
Washington.																									
1025	Canby, Fort.....	46 17	124 03	30																					
1026	Colville, Fort.....	48 42	118 02	1,993																					
1027	Dayton.....	46 19	117 50	1,683																					18.4
1028	Neah Bay.....	48 23	124 36	5																					9.3
1029	Olympia.....	47 03	122 53	76																					
1030	Port Blakely.....	47 32	122 40	50																					
1031	Port Angeles.....	48 07	123 06	14																					
1032	San Juan Island.....	48 23	123 01	150											13.4		18.4	17.1	19.3				34.6	30.9	17.5
1033	Spokane.....	47 40	117 25	1,909																					
1034	Steilacoom, Fort.....	47 10	122 34	300	39.5						39.5	50.1	38.8	33.4			35.9	25.9	45.2	32.8	33.9	34.7			
1035	Tatoosh Island.....	48 23	122 44	90																					
1036	Townsend, Fort.....	48 07	122 45	8																					
1037	Vancouver, Fort.....	45 40	122 30	50			42.1				52.7	17.9	40.5	38.9	34.5		42.0	30.4	42.6					34.2	
1038	Walla Walla.....	46 02	118 20	1,018									19.2	18.0	20.4		40.6	39.1		8.9	8.8				
West Virginia.																									
1039	Ashland.....	38 34	82 10	600					25.5																
1040	Charleston.....	38 02	81 40	598																					
1041	Helvetia.....	38 30	80 10	594																					
1042	Morgantown.....	39 39	80 10	616																					
1043	Parkersburg.....	39 16	81 34	616																					
1044	Rowlesburg.....	39 19	79 42	1,402																					
1045	Sheetz Mills.....	39 10	80 30								20.5	32.2	25.6	34.8	41.0	30.8	38.1	32.7	41.4	25.2	35.6	34.6			
1046	Wellsburg.....	40 15	80 42																						
1047	Weston.....	39 00	80 22	1,500																					
1048	Wheeling.....	40 03	80 43	637																					
1049	White Sul. Springs.....	37 50	80 25	2,000	34.2	34.2																			
Wisconsin.																									
1050	Beloit.....	42 30	89 11	750													37.5	39.7	29.8	30.9	24.5	32.5	30.2		35.3
1051	Bloomfield.....	42 35	88 32	600																					
1052	Crawford, Fort.....	43 03	91 14	695																					
1053	Embarrass.....	44 25	89 00	796																					
1054	Green Bay.....	44 31	88 00	616	31.5																				
1055	Howard, Fort.....	44 33	88 09	620																					
1056	Janesville.....	42 41	89 00	780				36.4	31.1		22.1	27.4	42.6												
1057	LaCrosse.....	43 49	91 15	744																					
1058	Madison.....	43 05	89 24	919																					
1059	Manitowoc.....	44 07	87 46	658																					
1060	Milwaukee.....	43 02	87 54	697	30.4	29.4		31.7	36.0		29.0	30.8	45.1	28.9	22.0	31.2	31.9	38.8	31.7	27.8	30.1	32.1	34.0	24.5	29.2
1061	Rocky Run.....	44 58	89 43																						27.5
1062	Superior City.....	46 44	92 13	680																					
1063	Winnebago, Fort.....	43 33	89 35	870											27.7		35.4	22.8	17.8	20.9	30.0	25.4	25.7		
Wyoming.																									
1064	Bridge, Fort.....	41 28	110 30	6,643																					
1065	Browne, Camp.....	42 58	108 55																						
1066	Cheyenne.....	41 08	104 48	6,105																					
1067	D. A. Russell, Fort.....	41 12	104 50	6,062																					
1068	Fetterman, Fort.....	42 50	105 29	5,250																					
1069	Fred Steele, Fort.....	41 47	106 57	7,640																					
1070	Laramie, Fort.....	42 12	104 31	4,472	9.6	31.4	31.0	22.4	18.8	22.6	15.1	6.0	7.7	6.2	3.4	7.7									

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## RAINFALL AND SNOW OF THE UNITED STATES.

TABLE II.—Annual and seasonal averages, seasonal variation, and cubic miles for each State.

State.	Area in square miles.	Spring.	Summer.	Autumn.	Winter.	Annual.	Seasonal variation.	Cubic miles.
		<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>	
Alabama .....	52,250	14.9	18.8	10.0	14.9	53.6	1.5	44.2
Arizona .....	113,020	1.8	4.8	2.2	8.1	10.9	3.8	19.4
Arkansas .....	53,850	14.3	12.5	11.0	12.8	50.6	3.9	42.5
California .....	158,360	6.2	0.8	3.5	11.9	21.9	40.0	54.9
Colorado .....	103,925	4.2	5.5	2.8	2.3	14.8	2.4	24.2
Connecticut .....	4,990	11.1	12.5	11.7	11.5	46.8	1.1	3.6
Delaware .....	2,050	10.2	11.0	10.0	9.6	40.8	1.1	1.8
District of Columbia .....	70	11.0	12.4	9.4	9.0	41.8	1.4	0.04
Florida .....	58,680	10.2	21.4	14.2	9.1	54.9	2.4	51.0
Georgia .....	59,475	12.4	15.6	10.7	12.7	51.4	1.5	48.2
Idaho .....	84,800	4.4	2.1	3.6	7.0	17.1	3.3	22.7
Illinois .....	56,650	10.2	11.2	9.0	7.7	38.1	1.5	34.0
Indiana .....	36,350	11.0	11.7	9.7	10.3	42.7	1.2	24.2
Indian Territory .....	31,400	10.6	11.0	8.9	5.7	36.2	1.9	17.7
Iowa .....	56,025	8.3	12.4	8.1	4.1	32.9	3.0	28.8
Kansas .....	82,080	8.9	11.9	6.7	3.5	31.0	3.4	40.0
Kentucky .....	40,400	12.4	12.5	9.7	11.8	46.4	1.3	29.8
Louisiana .....	48,720	18.7	15.0	10.8	14.4	58.9	1.4	41.6
Maine .....	33,040	11.1	10.5	12.3	11.1	45.0	1.2	23.2
Maryland .....	12,210	11.4	12.4	10.7	9.5	44.0	1.3	8.3
Massachusetts .....	8,315	11.6	11.4	11.9	11.7	46.6	1.0	5.9
Michigan .....	58,915	7.9	9.7	9.2	7.0	38.8	1.4	31.3
Minnesota .....	83,865	6.5	10.8	5.8	3.1	26.2	3.5	34.4
Mississippi .....	46,810	14.9	12.6	10.1	15.4	53.0	1.5	38.8
Missouri .....	69,415	10.0	12.4	9.1	6.5	38.0	1.9	41.2
Montana .....	146,080	4.2	4.9	2.6	2.3	14.0	2.1	32.1
Nebraska .....	77,510	8.9	10.9	4.9	2.2	26.9	5.0	32.9
Nevada .....	110,700	2.3	0.8	1.3	3.2	7.6	4.0	14.4
New Hampshire .....	9,305	9.8	12.2	11.4	10.7	44.1	1.2	6.3
New Jersey .....	7,815	11.7	13.3	11.2	11.1	47.3	1.2	5.6
New Mexico .....	122,580	1.4	5.8	3.5	2.0	12.7	4.1	24.5
New York .....	49,170	8.5	10.4	9.7	7.9	36.5	1.3	28.3
North Carolina .....	52,250	12.9	16.6	12.0	12.2	53.7	1.4	44.2
North Dakota .....	70,795	4.6	8.0	2.8	1.7	17.1	4.7	19.1
Ohio .....	41,060	10.0	11.9	9.0	9.1	40.0	1.3	25.7
Oregon .....	96,030	9.8	2.7	10.5	21.0	44.0	7.8	66.7
Pennsylvania .....	45,215	10.3	12.7	10.0	9.5	42.5	1.3	30.2
Rhode Island .....	1,250	11.9	10.7	11.7	12.4	46.7	1.2	0.8
South Carolina .....	30,570	9.8	16.2	9.7	9.7	45.4	1.7	21.6
South Dakota .....	77,650	7.2	9.7	8.5	2.5	22.9	3.9	28.1
Tennessee .....	42,050	13.5	12.5	10.2	14.5	50.7	1.4	33.4
Texas .....	265,780	8.1	8.6	7.6	6.0	30.3	1.4	127.0
Utah .....	84,970	3.4	1.5	2.2	3.5	10.6	2.3	14.3
Vermont .....	9,565	9.2	12.2	11.4	9.3	42.1	1.3	6.1
Virginia .....	42,450	10.9	12.5	9.5	9.7	42.6	1.3	28.5
Washington .....	69,180	8.6	3.9	10.5	16.8	39.8	4.8	43.4
West Virginia .....	24,780	10.9	12.9	9.0	10.0	42.8	1.4	16.6
Wisconsin .....	56,040	7.8	11.6	7.8	5.2	32.5	2.2	28.7
Wyoming .....	97,890	4.3	8.5	2.2	1.6	11.6	2.7	17.9
Total .....	2,985,850							1407.14
Average .....		9.2	10.3	8.3	8.6	36.3	3.0	23.72



# RAINFALL AND SNOW OF THE UNITED STATES.

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TABLE III.—Mean daily rainfall for 18 to 28 years at 12 selected stations expressed as a percentage of days on which rain fell.

EASTPORT, ME. (twenty years).													SAVANNAH, GA. (twenty-two years).												
	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.		Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	32	68	32	45	35	35	30	30	50	35	45	40	1.....	41	36	41	36	23	36	50	64	59	36	9	14
2.....	58	42	58	35	55	45	40	35	35	35	35	45	2.....	23	32	27	41	23	23	59	45	45	18	18	23
3.....	58	58	37	60	20	35	40	30	25	35	50	45	3.....	36	50	14	36	23	41	41	50	23	14	18	23
4.....	37	53	42	55	20	60	60	30	15	35	30	30	4.....	50	27	27	27	27	50	45	64	41	14	14	36
5.....	47	37	42	65	25	55	50	45	45	60	30	50	5.....	45	27	27	18	41	41	45	59	41	18	27	27
6.....	58	37	58	50	35	35	45	40	40	30	40	40	6.....	32	32	23	5	23	32	41	55	55	32	32	32
7.....	74	21	58	35	40	50	40	35	15	30	40	55	7.....	32	45	27	27	14	36	32	50	36	23	27	18
8.....	58	42	53	30	50	60	35	45	40	40	40	45	8.....	27	73	45	55	14	64	45	59	45	18	23	18
9.....	58	58	42	30	45	35	35	20	35	30	55	50	9.....	41	45	41	18	64	45	45	41	18	32	32	32
10.....	68	47	58	30	55	40	45	40	40	35	50	50	10.....	36	23	18	14	27	55	41	45	41	36	45	32
11.....	32	53	42	40	45	40	40	35	20	40	50	70	11.....	23	41	27	18	32	55	55	41	50	50	0	23
12.....	42	68	63	40	45	50	30	40	30	50	50	50	12.....	32	32	36	32	41	23	41	45	36	23	18	18
13.....	53	42	58	30	30	40	45	50	35	40	50	55	13.....	36	36	45	14	41	41	23	45	41	23	18	18
14.....	58	32	53	40	45	35	60	55	35	25	35	45	14.....	32	50	23	36	45	23	36	45	45	18	32	32
15.....	42	42	37	35	55	25	30	40	40	35	25	50	15.....	23	55	41	41	27	36	55	50	27	18	32	45
16.....	42	26	37	25	55	45	40	55	40	35	45	50	16.....	32	32	36	41	9	45	18	41	27	27	32	32
17.....	63	63	63	35	45	45	45	35	40	45	35	40	17.....	36	27	27	27	14	45	27	50	45	18	27	36
18.....	53	58	63	45	50	35	40	50	40	40	60	50	18.....	36	50	27	27	14	36	50	27	36	23	36	27
19.....	47	58	47	40	50	40	40	40	50	35	45	50	19.....	41	41	45	32	36	41	50	50	45	27	36	18
20.....	47	53	53	50	45	45	40	55	40	40	55	25	20.....	27	27	23	27	23	27	55	41	32	32	27	41
21.....	58	63	53	40	50	40	50	20	45	40	25	40	21.....	36	50	27	27	32	55	45	36	27	23	36	32
22.....	47	37	42	25	65	60	60	45	45	30	20	55	22.....	36	23	27	18	41	41	45	45	32	36	32	27
23.....	53	68	53	30	50	55	60	40	35	45	50	45	23.....	41	32	14	36	32	36	32	45	50	41	23	27
24.....	47	47	42	45	35	40	55	40	60	55	55	40	24.....	32	23	23	32	14	45	32	36	50	18	18	36
25.....	63	53	42	25	50	60	40	45	40	45	50	45	25.....	36	41	41	23	23	45	32	23	23	14	18	55
26.....	53	68	37	45	45	30	45	25	50	35	40	30	26.....	27	27	45	9	36	50	32	36	32	23	23	55
27.....	74	37	42	35	60	45	60	30	35	55	35	60	27.....	23	32	36	14	41	55	32	45	45	32	32	23
28.....	68	21	58	30	45	70	40	15	55	50	45	45	28.....	41	27	41	36	36	45	68	59	36	32	41	14
29.....	53	40	47	70	40	35	50	25	40	45	55	45	29.....	23	40	27	36	41	59	45	55	27	27	41	41
30.....	42	.....	58	60	55	40	60	50	35	60	30	45	30.....	36	.....	9	14	36	59	41	41	18	32	9	23
31.....	53	.....	53	.....	40	.....	30	30	.....	60	.....	30	31.....	32	.....	32	.....	36	.....	45	27	.....	14	.....	36

NEW BRUNSWICK, N. J. (twenty-eight years).													KEY WEST, FLA. (twenty-two years).												
	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.		Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	43	25	36	29	15	30	26	30	26	26	19	19	1.....	45	9	5	14	14	32	45	50	59	55	23	23
2.....	29	7	25	43	26	26	22	48	11	26	22	22	2.....	27	27	32	5	27	41	36	41	64	55	9	23
3.....	14	39	36	25	15	33	26	33	11	22	30	19	3.....	23	36	14	23	14	32	45	59	50	64	23	9
4.....	21	36	43	29	33	44	44	37	26	26	19	22	4.....	23	23	14	32	14	50	50	41	64	59	36	32
5.....	29	32	25	32	37	33	44	37	19	19	19	30	5.....	41	36	14	36	27	27	59	45	68	73	36	14
6.....	46	18	32	39	41	37	33	26	30	22	11	41	6.....	41	27	23	9	9	23	68	59	50	55	32	23
7.....	29	18	25	36	30	33	30	37	30	22	30	37	7.....	14	41	14	9	32	18	41	55	50	59	50	23
8.....	32	43	25	21	44	30	26	37	37	22	22	26	8.....	27	41	14	5	32	32	55	50	27	64	41	32
9.....	29	25	29	14	33	30	41	26	22	22	30	22	9.....	27	36	32	5	32	50	50	55	59	50	32	36
10.....	32	29	32	36	37	44	33	19	37	19	41	22	10.....	32	23	14	14	27	41	23	64	59	55	41	21
11.....	21	36	29	36	33	41	37	30	19	37	30	37	11.....	18	45	23	9	23	50	32	55	55	41	23	32
12.....	14	43	29	43	22	37	44	26	33	37	30	22	12.....	41	41	14	14	18	64	27	50	55	45	41	18
13.....	29	29	43	43	44	30	22	33	41	22	15	33	13.....	32	32	23	23	27	64	45	45	55	50	36	27
14.....	25	32	14	25	33	22	26	26	30	26	19	37	14.....	32	27	23	23	23	32	59	50	50	36	23	27
15.....	36	39	32	11	33	41	22	26	19	22	22	19	15.....	23	27	9	23	27	36	55	41	55	32	23	32
16.....	39	25	32	50	26	26	37	30	26	11	22	19	16.....	36	14	14	18	45	50	36	45	77	36	9	32
17.....	46	18	32	29	19	41	33	37	30	15	15	33	17.....	45	18	36	18	41	23	55	41	68	18	23	32
18.....	18	39	21	18	26	30	26	26	37	11	48	33	18.....	36	32	14	14	27	36	41	50	59	27	45	23
19.....	25	32	25	21	30	33	27	26	26	22	30	22	19.....	32	36	9	14	27	36	36	55	59	47	50	18
20.....	32	32	29	36	33	22	30	19	19	26	33	26	20.....	32	18	18	18	27	55	41	36	64	36	32	41
21.....	32	29	60	32	37	15	52	26	22	26	33	33													

## RAINFALL AND SNOW OF THE UNITED STATES.

TABLE III.—Mean daily rainfall, etc.—Continued.

ST. LOUIS, MO. (twenty-two years).

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	45	36	45	18	45	45	36	41	32	36	32	23
2.....	36	36	27	41	41	55	55	23	32	23	32	14
3.....	23	41	41	32	59	23	36	18	14	23	9	32
4.....	45	27	36	27	59	41	23	27	27	41	27	41
5.....	41	36	50	18	55	23	27	23	36	32	41	36
6.....	32	41	41	41	41	32	18	36	9	23	32	45
7.....	36	36	45	41	36	41	27	18	23	27	41	36
8.....	32	41	36	41	32	50	41	27	23	23	50	41
9.....	32	32	36	45	41	59	41	36	36	27	55	32
10.....	23	32	41	41	36	36	32	32	32	18	41	45
11.....	23	50	45	36	55	45	32	32	27	14	32	23
12.....	36	36	36	23	50	32	27	32	41	23	27	32
13.....	41	45	23	32	45	41	36	18	14	36	23	32
14.....	36	23	36	59	45	50	36	23	14	36	36	23
15.....	55	36	27	50	55	50	27	27	27	41	23	41
16.....	36	32	36	41	27	50	27	23	23	36	41	45
17.....	14	36	23	41	36	45	55	32	14	27	55	27
18.....	36	36	41	36	45	32	27	18	0	23	36	36
19.....	45	41	45	50	32	32	23	18	27	23	23	18
20.....	41	32	50	36	50	45	27	18	23	18	50	50
21.....	23	27	27	45	45	45	18	36	14	27	36	45
22.....	27	32	27	45	27	18	27	32	18	45	36	41
23.....	36	32	23	41	36	23	23	5	14	23	50	50
24.....	18	55	27	23	36	36	27	14	27	18	41	45
25.....	9	55	50	18	36	45	27	41	27	27	32	41
26.....	23	32	45	32	36	50	45	23	32	36	45	41
27.....	45	27	41	27	41	59	41	27	32	18	36	41
28.....	36	50	59	45	45	36	27	27	45	18	41	23
29.....	23	40	41	32	36	45	36	45	41	23	27	36
30.....	41	.....	50	45	32	41	27	23	36	18	32	41
31.....	32	.....	50	.....	27	.....	36	23	.....	23	.....	45

OMAHA, NEBR. (twenty-two years).

1.....	32	14	23	28	41	55	41	23	19	28	28	9
2.....	14	23	28	28	51	55	46	23	41	28	14	14
3.....	23	14	28	37	28	41	41	19	41	23	9	28
4.....	23	28	19	28	41	37	37	46	23	19	28	28
5.....	41	28	32	14	32	37	41	41	28	37	14	28
6.....	23	32	37	41	32	55	23	46	46	19	9	28
7.....	41	46	41	32	46	46	32	19	41	14	23	28
8.....	32	41	46	46	41	51	46	32	46	32	19	23
9.....	23	23	28	46	41	41	41	28	46	32	23	23
10.....	19	32	19	41	51	37	37	19	28	14	19	23
11.....	19	32	32	46	46	32	37	19	37	28	23	23
12.....	46	19	14	37	41	55	19	23	51	32	14	19
13.....	23	19	14	55	46	46	28	51	28	37	23	23
14.....	23	28	23	41	46	51	28	37	32	28	9	23
15.....	41	28	37	23	46	41	32	41	23	46	14	23
16.....	28	23	28	32	41	37	41	37	19	28	23	19
17.....	28	41	14	37	55	41	41	19	19	19	32	46
18.....	28	28	32	23	55	37	41	32	28	28	23	23
19.....	23	28	23	55	28	46	46	28	22	9	23	32
20.....	28	28	46	46	41	46	37	41	28	23	19	46
21.....	9	23	32	59	32	32	37	32	23	28	32	51
22.....	46	23	14	41	51	14	23	19	23	23	23	23
23.....	28	37	0	19	23	32	32	28	32	14	9	27
24.....	14	32	14	23	32	41	28	32	32	5	14	28
25.....	14	23	32	32	32	28	46	32	23	19	19	37
26.....	14	5	32	37	55	46	37	32	41	28	19	41
27.....	28	37	51	32	28	51	41	28	28	23	19	28
28.....	9	23	32	46	46	32	37	28	28	19	37	37
29.....	19	51	32	32	41	32	32	23	23	19	14	23
30.....	23	.....	32	37	51	28	32	14	14	19	14	37
31.....	28	.....	37	.....	64	.....	19	19	.....	9	.....	41

GALVESTON, TEX. (twenty-one years).

1.....	52	52	43	57	23	14	36	18	41	27	23	14
2.....	33	62	19	18	5	32	32	41	41	23	14	50
3.....	48	43	19	18	23	32	41	41	23	14	23	45
4.....	52	29	33	24	32	32	32	50	23	43	45	45
5.....	33	52	19	19	9	18	45	27	36	14	36	36
6.....	43	52	29	24	32	32	41	50	27	27	32	32
7.....	38	57	48	24	23	45	27	27	45	32	23	32
8.....	52	33	48	38	23	27	32	45	41	18	36	18
9.....	38	33	33	19	32	23	27	36	32	23	41	23
10.....	38	48	24	14	32	32	32	50	41	14	23	32
11.....	48	38	38	19	18	14	32	32	36	18	18	23
12.....	67	33	43	19	18	27	9	50	36	14	55	45
13.....	43	38	38	33	23	27	32	45	32	32	36	41
14.....	38	33	33	33	14	27	32	41	36	23	45	36
15.....	62	43	33	14	9	23	23	36	36	32	36	18
16.....	38	38	38	10	5	23	45	41	36	45	36	32
17.....	38	33	48	10	9	39	45	36	23	32	32	27
18.....	52	24	33	14	32	36	32	41	23	32	27	32
19.....	33	33	29	38	18	36	32	45	27	27	27	59
20.....	38	52	29	29	36	45	18	36	18	14	18	27
21.....	38	38	24	24	23	32	32	41	23	32	50	50
22.....	33	52	33	43	9	23	27	45	45	32	27	27
23.....	52	38	38	38	0	23	45	27	27	14	32	55
24.....	38	33	43	38	18	32	32	32	50	27	23	68
25.....	33	29	48	29	14	14	41	23	50	23	36	41
26.....	24	33	24	24	45	55	23	18	32	41	50	36
27.....	19	33	38	33	32	50	27	18	27	32	36	27
28.....	38	29	10	10	32	36	27	27	32	23	36	50
29.....	19	16	14	33	27	32	27	23	18	14	45	45
30.....	29	.....	5	5	27	23	23	27	32	23	45	45
31.....	48	.....	38	.....	18	.....	27	32	.....	18	.....	73

SANTA FE, N. MEX. (nineteen years January-May, twenty years June-December).

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	5	15	35	30	15	16	21	37	47	11	16	5
2.....	20	15	15	10	15	16	32	47	21	5	11	11
3.....	20	10	30	10	15	32	21	32	37	21	11	16
4.....	15	20	25	20	20	42	21	47	37	21	16	26
5.....	15	30	25	10	15	37	32	47	21	26	26	26
6.....	10	30	20	20	20	37	32	26	32	11	5	21
7.....	25	25	10	30	20	32	53	37	26	0	21	16
8.....	35	25	20	35	35	16	47	26	21	5	47	11
9.....	15	25	15	10	30	16	53	42	26	16	32	11
10.....	15	40	25	10	25	21	53	32	26	21	21	11
11.....	15	20	20	10	20	5	42	42	26	21	26	26
12.....	30	40	5	40	25	16	58	37	21	21	16	26
13.....	5	25	10	30	20	5	53	58	21	32	21	21
14.....	25	15	25	20	20	26	47	53	11	26	16	21
15.....	35	15	25	20	10	16	58	53	16	11	11	5
16.....	20	30	15	35	30	21	58	42	21	11	21	21
17.....	25	25	20	25	30	21	47	42	21	11	26	16
18.....	20	25	25	15	20	11	47	47	11	11	16	11
19.....	25	25	25	20	25	16	91	32	11	11	11	16
20.....	35	15	20	35	15	11	63	47	26	21	5	16
21.....	20	15	20	35	25	26	58	37	26	21	11	26
22.....	15	35	15	20	0	26	47	47	26	16	26	16
23.....	15	35	20	15	10	26	63	53	32	5	5	21
24.....	20	35	25	25	35	21	79	37	32	11	11	26
25.....	15	25	40	20	30	26	58	37	21	16	26	26
26.....	20	20	25	20	30	21	53	26	32	11	16	11
27.....	25	30	25	20	30	21	58	26	26	11	11	21
28.....	20	15	10	20	20	26	53	37	21	0	5	42
29.....	25	40	25	15	10	11	32	42	11	16	5	37
30.....	15	.....	10	20	30	16	26	42	16	5	11	53
31.....	20	.....	35	.....	5	.....	26	42	.....	21	.....	26

# RAINFALL AND SNOW OF THE UNITED STATES.

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TABLE IV.—Combined averages of hourly occurrences of precipitation at Blue Hill Observatory, near Boston, Mass., Washington, D. C., and Central Park, New York, N. Y., weighting the different records thus: Blue Hill, 1; Washington, 2; Central Park, 8.

Season.	1 a. m.	2 a. m.	3 a. m.	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.	10 p. m.	11 p. m.	Midn't.	Mean.
Winter.....	3.1	3.4	3.4	3.6	3.8	3.9	3.9	3.9	4.0	3.9	4.2	4.0	3.8	3.8	3.7	3.8	3.7	3.7	3.6	3.7	3.6	3.7	3.4	3.2	3.7
Spring.....	3.1	3.5	3.8	3.6	3.5	3.5	3.5	3.6	3.6	3.5	3.4	3.3	3.1	3.3	3.4	3.5	3.6	3.4	3.6	3.6	3.5	3.6	3.7	3.3	3.5
Summer.....	2.2	2.3	2.2	2.2	2.4	2.2	2.2	2.2	2.1	2.2	2.1	1.9	2.2	2.3	2.4	2.8	2.7	2.9	2.8	2.7	2.7	2.6	2.5	2.1	2.4
Autumn.....	2.8	3.0	3.1	3.0	2.9	3.0	2.9	3.0	2.9	2.9	2.9	2.9	2.8	2.9	2.9	2.8	2.9	2.8	2.8	3.0	2.7	2.7	2.9	2.7	2.9

Seasonal averages (amounts, thousandths of an inch).

Winter.....	.110	.118	.136	.134	.135	.138	.132	.129	.132	.151	.171	.174	.159	.134	.150	.141	.126	.120	.119	.125	.135	.123	.108	.201	.133
Spring.....	.120	.123	.133	.143	.140	.141	.137	.129	.133	.139	.149	.128	.114	.154	.139	.147	.159	.136	.135	.141	.134	.133	.142	.146	.137
Summer.....	.142	.154	.153	.144	.146	.123	.146	.144	.128	.139	.131	.124	.158	.198	.226	.225	.231	.225	.247	.197	.230	.167	.165	.130	.153
Autumn.....	.135	.140	.157	.144	.147	.135	.154	.172	.131	.132	.137	.123	.109	.116	.155	.160	.132	.137	.147	.144	.171	.152	.124	.137	.136

TABLE V.—Details of precipitation.

ALBANY, N. Y.

[From January, 1874, to December, 1891, inclusive.]

Month.	Monthly dis- tribution of precipitation.	Percentage of days on which rain fell.			Classification of rainfall: Percentage of days with (or without) rain.								Heaviest rain in one day.	Greatest consecutive No. of days—		Notes.	
		Mean.	Max.	Min.	.00	T. to .25	.26 to .50	.51 to 1.00	1.01 to 2.00	2.01 to 3.00	3.01 to 5.00	Over 5.00		With- out rain.	With rain.		
Per ct.																	
January .....	7.7	54.7	74.2	32.3	45.3	41.6	7.2	5.0	0.9	0.0	0.0	0.0	Inches.	1.3	14	9	1 1890. 2 1877. 3 September, 1890. 4 December, 1883; September, 1889.
February .....	6.7	53.3	79.3	17.9	46.7	41.3	7.3	3.9	0.8	0.0	0.0	0.0	1.5	12	9		
March .....	7.5	53.4	61.3	35.5	46.6	41.7	5.9	5.2	0.4	0.2	0.0	0.0	2.3	7	10		
April .....	6.7	46.9	70.0	26.7	53.1	35.7	5.9	4.5	0.6	0.2	0.0	0.0	2.1	16	6		
May .....	7.7	49.1	71.0	22.6	50.9	36.3	7.2	4.7	0.9	0.0	0.0	0.0	1.9	15	9		
June .....	9.8	48.3	66.7	36.7	51.7	34.2	6.3	5.0	2.4	0.4	0.0	0.0	3.0	6	11		
July .....	10.6	48.4	67.7	29.0	51.6	32.6	5.9	6.6	3.1	0.2	0.0	0.0	2.3	9	6		
August .....	10.0	40.9	74.2	22.6	59.1	26.9	5.4	4.6	3.8	0.2	0.0	0.0	2.2	12	8		
September .....	9.3	40.6	60.0	26.7	59.4	26.5	6.5	4.8	2.0	0.6	0.2	0.0	3.2	11	12		
October .....	8.8	44.1	64.5	19.4	55.9	30.1	6.8	4.3	2.9	0.0	0.0	0.0	1.7	11	8		
November .....	8.0	52.6	63.3	36.7	47.4	38.7	7.2	5.4	1.3	0.0	0.0	0.0	1.8	8	9		
December ...	7.2	54.1	67.7	25.8	45.9	42.7	5.4	4.8	1.0	0.2	0.0	0.0	2.3	10	12		
Year .....	100.0	48.9	57.3 <sup>1</sup>	35.3 <sup>2</sup>	51.1	35.7	6.4	4.9	1.7	0.2	0.02	0.0	3.2 <sup>3</sup>	17	12 <sup>4</sup>		

ALPENA, MICH.

[From October, 1873, to December, 1891, inclusive.]

January.....	7.1	65.1	83.9	41.9	34.9	54.8	6.4	3.4	0.5	0.0	0.0	0.0	1.1	6	21	1 1890. 2 1873. 3 June, 1875. 4 January and February, 1891.
February.....	6.0	61.8	82.1	21.4	38.2	53.1	5.2	2.8	0.7	0.0	0.0	0.0	1.7	11	11	
March.....	5.8	55.0	61.3	22.6	45.0	45.7	5.7	3.4	0.0	0.2	0.0	0.0	2.2	8	12	
April.....	5.8	45.3	63.3	23.3	54.7	35.8	5.8	3.0	0.7	0.0	0.0	0.0	1.5	13	10	
May.....	9.3	43.0	83.9	25.8	57.0	29.9	5.6	5.6	1.7	0.2	0.0	0.0	2.6	13	10	
June.....	9.9	44.2	83.3	20.0	55.8	30.2	6.3	5.3	1.9	0.5	0.0	0.0	2.2	20	11	
July.....	8.8	43.5	58.1	19.4	56.5	30.4	5.6	5.4	2.1	0.0	0.0	0.0	1.8	13	7	
August.....	10.2	42.4	64.5	19.4	57.6	29.6	5.3	3.9	2.9	0.7	0.0	0.0	2.5	10	6	
September.....	11.0	47.5	66.7	26.7	52.5	33.5	6.5	4.5	2.1	0.9	0.0	0.0	2.7	10	9	
October.....	11.0	55.6	80.6	38.7	44.4	41.9	6.7	3.9	2.4	0.5	0.2	0.0	3.9	11	10	
November.....	8.2	64.5	83.3	43.3	35.5	53.7	5.5	4.3	0.8	0.2	0.0	0.0	2.3	10	13	
December.....	6.9	67.2	87.1	48.4	32.8	57.6	7.0	2.1	0.5	0.0	0.0	0.0	1.6	8	14	
Year.....	100.0	52.9	63.8 <sup>1</sup>	34.8 <sup>2</sup>	47.1	41.3	6.0	4.0	1.3	0.3	0.02	0.0	3.9	20 <sup>3</sup>	26 <sup>4</sup>	

ATLANTA, GA.

[From October, 1878, to December, 1891, inclusive.]

January.....	11.5	54.8	77.4	41.9	45.2	34.5	6.0	8.4	4.5	1.2	0.2	0.0	4.0	7	15	1 1891. 2 1879. 3 September and October, 1884. 4 January, 1882.
February.....	9.7	46.6	71.4	25.0	53.4	27.3	7.6	5.9	4.6	1.1	0.0	0.0	3.0	8	13	
March.....	11.9	42.7	64.5	25.8	57.3	23.1	6.0	6.7	6.0	0.5	0.2	0.2	7.4	14	9	
April.....	6.8	42.0	53.3	23.3	56.0	29.2	5.6	4.1	2.1	0.8	0.3	0.0	3.1	11	5	
May.....	7.0	37.5	58.1	19.4	62.5	24.6	5.5	4.5	2.0	0.5	0.5	0.0	3.9	13	12	
June.....	8.0	46.2	70.0	26.7	53.8	30.3	5.4	6.2	4.1	0.3	0.0	0.0	2.2	14	9	
July.....	8.6	45.2	61.3	19.4	54.8	30.0	5.5	5.2	3.5	0.5	0.5	0.0	3.5	13	10	
August.....	8.0	49.4	67.8	35.5	50.6	32.8	6.7	7.2	2.5	0.0	0.2	0.0	4.2	10	7	
September.....	7.7	33.8	63.3	16.7	66.2	21.3	4.9	2.8	2.8	1.5	0.5	0.0	3.2	17	9	
October.....	4.6	30.4	51.6	9.7	69.6	21.2	4.4	3.0	1.4	0.5	0.0	0.0	2.7	20	7	
November.....	7.3	36.9	56.7	13.3	63.1	23.6	4.5	4.3	4.3	0.2	0.0	0.0	2.3	13	7	
December.....	8.9	41.0	54.9	12.9	59.0	24.6	5.8	6.2	3.5	0.5	0.5	0.0	3.8	19	9	
Year.....	100.0	42.2	49.3 <sup>1</sup>	36.4 <sup>2</sup>	57.8	26.9	5.7	5.4	3.4	0.6	0.2	0.02	7.4	25 <sup>3</sup>	15 <sup>4</sup>	



## RAINFALL AND SNOW OF THE UNITED STATES.

TABLE V.—*Details of precipitation*—Continued.

ATLANTIC CITY, N. J.

[From January, 1874, to December, 1891, inclusive.]

Month.	Monthly distribution of precipitation.	Percentage of days on which rain fell.			Classification of rainfall: Percentage of days (or without) rain.								Heaviest rain in one day.	Greatest consecutive No. of days—		Notes.
		Mean.	Max.	Min.	.00	T. to .25	.26 to .50	.51 to 1.00	1.01 to 2.00	2.01 to 3.00	3.01 to 5.00	Over 5.00		Without rain.	With rain.	
January	Per ct.	46.8	67.7	29.0	53.2	32.2	5.1	7.3	2.2	0.0	0.0	0.0	1.9	10	7	<sup>1</sup> 1889.
February	8.9	45.9	64.3	32.1	54.1	29.5	7.5	7.3	1.6	0.0	0.0	0.0	1.7	11	6	<sup>2</sup> 1874.
March	9.2	50.7	64.5	32.3	49.3	34.2	8.6	5.7	2.0	0.2	0.0	0.0	2.2	8	11	<sup>3</sup> August, 1879.
April	7.7	43.3	66.7	26.7	56.7	30.1	5.9	5.0	1.9	0.2	0.2	0.0	3.2	13	6	<sup>4</sup> October and November, 1874.
May	6.6	41.6	71.0	16.1	58.4	28.8	6.8	4.7	1.3	0.0	0.0	0.0	2.0	13	12	<sup>5</sup> December, 1875, and January, 1876.
June	7.3	34.6	56.7	20.0	65.4	21.7	5.9	4.4	2.4	0.2	0.0	0.0	2.7	11	7	
July	8.5	38.9	64.5	19.4	61.1	26.2	5.2	4.1	2.9	0.5	0.0	0.0	2.4	12	7	
August	11.0	38.0	61.3	12.9	62.0	25.2	5.0	4.1	2.0	1.1	0.2	0.4	9.0			
September	7.7	33.5	60.0	10.0	66.5	21.1	4.2	5.5	1.9	0.6	0.2	0.0	3.2	16	7	
October	8.0	38.7	61.3	9.7	61.3	26.8	5.4	4.1	2.0	0.0	0.2	0.0	6.0	21	6	
November	8.0	38.7	56.7	16.7	61.3	25.9	5.1	5.0	1.9	0.4	0.4	0.0	3.6	17	7	
December	8.9	41.9	61.3	12.9	58.1	28.1	5.4	4.8	2.9	0.7	0.0	0.0	2.3	14	10	
Year	100.0	41.0	47.7 <sup>1</sup>	30.1 <sup>2</sup>	59.0	27.5	5.8	5.2	2.1	0.3	0.1	0.05	9.0 <sup>3</sup>	38 <sup>4</sup>	13 <sup>5</sup>	

## AUGUSTA, GA.

[From February, 1871, to December, 1891, inclusive.]

January	9.3	42.1	71.0	19.4	57.9	26.0	5.3	6.6	3.7	0.5	0.0	0.0	2.1	11	11	<sup>1</sup> 1891.
February	7.9	39.8	60.7	25.0	60.2	23.9	7.8	5.2	2.4	0.5	0.0	0.0	2.4	12	7	<sup>2</sup> 1872.
March	11.2	39.3	61.3	22.6	60.7	21.8	6.9	5.3	4.3	0.5	0.5	0.0	4.4	14	6	<sup>3</sup> September, 1881.
April	7.5	32.7	53.3	10.0	67.3	19.8	4.3	5.2	2.6	0.8	0.0	0.0	2.9	20	7	<sup>4</sup> April and May, 1888.
May	7.1	32.1	45.2	19.4	67.9	20.7	4.3	3.8	2.6	0.5	0.2	0.0	3.1	16	7	<sup>5</sup> July and August, 1879.
June	8.7	41.6	58.0	22.6	58.4	25.8	5.9	5.6	4.3	0.0	0.0	0.0	2.0	14	10	
July	10.8	44.7	64.5	19.4	55.3	27.4	7.2	5.2	3.7	0.9	0.3	0.0	4.6	11	8	
August	10.0	46.7	64.5	32.3	53.3	29.0	7.8	5.2	3.9	0.5	0.3	0.0	3.1	11	9	
September	7.7	33.3	76.7	16.7	66.7	22.2	3.3	4.0	2.4	1.1	0.3	0.0	4.9	18	11	
October	5.6	25.3	51.6	6.5	74.7	16.2	4.0	2.8	1.8	0.5	0.0	0.0	2.4	22	8	
November	6.7	33.0	56.7	13.3	67.0	20.7	5.9	3.7	2.0	0.5	0.2	0.0	3.1	15	6	
December	7.5	35.5	58.0	9.7	64.5	20.9	6.0	5.1	3.5	0.0	0.0	0.0	1.6	20	7	
Year	100.0	37.2	44.1 <sup>1</sup>	33.1 <sup>2</sup>	62.8	22.9	5.7	4.8	3.1	0.5	0.2	0.0	4.9 <sup>3</sup>	26 <sup>4</sup>	17 <sup>5</sup>	

## BALTIMORE, MD.

[From November, 1870, to December, 1891, inclusive.]

January	7.4	44.4	67.7	16.1	55.6	30.8	7.2	5.2	1.2	0.0	0.0	0.0	1.9	13	6	<sup>1</sup> 1889.
February	8.0	44.4	68.7	21.4	55.6	28.7	7.4	4.9	3.2	0.2	0.0	0.0	2.6	13	11	<sup>2</sup> 1871.
March	9.6	47.2	67.7	25.8	52.8	32.6	5.5	6.0	2.6	0.3	0.2	0.0	3.5	11	10	<sup>3</sup> October and November, 1874.
April	7.2	40.6	60.0	20.0	59.4	28.9	6.0	3.5	1.7	0.3	0.2	0.0	3.6	14	6	<sup>4</sup> August, 1873.
May	7.8	42.9	74.2	16.1	57.1	28.6	6.8	5.4	1.8	0.3	0.0	0.0	2.2	21	13	
June	9.2	37.9	63.3	23.3	62.1	22.0	6.7	6.0	1.9	1.1	0.2	0.0	4.5	12	6	
July	11.4	41.8	61.3	22.6	58.2	27.5	5.1	4.1	3.4	1.2	0.5	0.0	3.8	14	7	
August	10.0	44.1	67.7	22.6	55.9	28.9	6.1	4.8	3.5	0.5	0.3	0.0	3.8	12	14	
September	8.7	36.0	66.7	13.3	64.0	21.9	5.2	5.1	3.2	0.3	0.3	0.0	4.0	16	12	
October	6.9	37.2	61.3	6.5	62.8	26.0	5.2	3.8	1.4	0.8	0.0	0.0	2.9	21	6	
November	6.9	37.9	60.0	20.0	62.1	25.6	6.1	4.2	1.8	0.2	0.0	0.0	2.8	11	7	
December	6.9	39.9	58.1	22.6	60.1	28.6	5.6	3.2	2.2	0.3	0.0	0.0	2.8	17	9	
Year	100.0	41.2	52.9 <sup>1</sup>	28.5 <sup>2</sup>	58.8	27.5	6.1	4.7	2.3	0.5	0.1	0.0	4.5	29 <sup>3</sup>	14 <sup>4</sup>	

## BISMARCK, N. DAK.

[From September 16, 1874, to December 31, 1891, inclusive.]

January	3.1	36.4	51.6	16.0	63.6	35.6	0.6	0.2	0.0	0.0	0.0	0.0	0.6	14	9	<sup>1</sup> 1877.
February	3.7	38.6	72.0	7.0	61.4	37.5	1.0	0.1	0.0	0.0	0.0	0.0	0.6	20	7	<sup>2</sup> 1889.
March	5.2	37.4	48.4	19.4	62.6	33.8	2.1	1.5	0.0	0.0	0.0	0.0	0.9	12	10	<sup>3</sup> 1883.
April	12.4	34.7	63.3	20.0	65.3	26.4	3.9	3.3	1.0	0.1	0.0	0.0	2.4	14	10	<sup>4</sup> January and February, 1877.
May	13.6	44.6	87.3	29.1	55.4	34.7	5.3	3.6	1.0	0.0	0.0	0.0	1.9	12	9	<sup>5</sup> June and July, 1888.
June	18.8	47.5	70.0	20.0	52.5	32.8	8.4	3.1	0.2	3.0	0.0	0.0	2.4	15	11	
July	13.0	39.5	61.3	19.3	60.5	28.3	5.7	4.2	1.3	0.0	0.0	0.0	1.8	15	5	
August	11.4	30.4	54.8	12.9	69.6	22.6	4.2	1.9	1.1	0.6	0.0	0.0	2.2	14	7	
September	5.7	25.5	50.0	10.0	74.5	21.7	1.4	2.0	0.4	0.0	0.0	0.0	1.6	15	6	
October	5.7	28.9	51.6	6.4	71.1	23.7	3.8	1.4	0.0	0.0	0.0	0.0	1.0	19	5	
November	3.7	33.3	63.3	16.7	66.7	31.5	1.4	0.2	0.2	0.0	0.0	0.0	1.1	18	9	
December	3.7	36.6	58.0	9.7	63.4	35.1	0.9	0.6	0.0	0.0	0.0	0.0	0.6	27	9	
Year	100.0	36.1	41.6 <sup>1</sup>	29.0 <sup>2</sup>	63.9	30.3	3.2	1.8	0.4	0.3	0.0	0.0	2.4	31 <sup>3</sup>	15 <sup>4</sup>	

## BOISE CITY, IDAHO.

[From July, 1877, to December, 1891, inclusive.]

January	15.7	42.9	61.3	22.6	57.1	34.6	6.0	2.1	0.2	0.0	0.0	0.0	1.1	17	11	<sup>1</sup> 1885.
February	11.3	45.3	67.9	10.7	54.7	37.2	6.1	2.0	0.0	0.0	0.0	0.0	0.8	14	11	<sup>2</sup> 1883.
March	9.8	33.6	61.3	6.5	66.4	28.5	5.5	1.2	0.5	0.0	0.0	0.0	1.3	24	10	<sup>3</sup> 1891. Cloud-burst, about 18 inches on level ground; gauge washed away.
April	8.3	30.7	53.3	6.7	69.3	25.0	3.5	0.2	0.0	0.0	0.0	0.0	0.8	13	11	<sup>4</sup> July 12 to September 15, 1891.
May	9.8	30.4	48.4	6.5	69.6	25.3	3.0	1.6	0.2	0.0	0.0	0.2	18.0 <sup>5</sup>	23	6	<sup>5</sup> December, 1884.
June	7.5	31.7	63.3	3.3	68.3	27.4	2.4	1.7	0.2	0.0	0.0	0.0	1.1	23	9	
July	1.5	11.0	29.0	0.0	89.0	10.3	0.6	0.0	0.0	0.0	0.0	0.0	0.4	31	6	
August	1.5	8.4	19.4	0.0	91.6	7.7	0.6	0.0	0.0	0.0	0.0	0.0	0.3	31	4	
September	3.0	11.8	36.7	3.3	88.2	10.4	0.7	0.7	0.0	0.0	0.0	0.0	0.9	29	4	
October	9.8	26.2	48.4	3.2	73.8	22.3	2.2	1.7	0.0	0.0	0.0	0.0	0.9	21	6	
November	6.0	27.1	66.7	0.0	72.9	24.2	2.7	0.2	0.0	0.0	0.0	0.0	0.7	30	8	
December	15.8	42.6	77.4	6.5	57.4	34.8	5.8	1.5	0.4	0.0	0.0	0.0	1.1	18	13	
Year	100.0	28.5	37.8 <sup>1</sup>	18.4 <sup>2</sup>	71.5	24.0	3.3	1.1	0.1	0.0	0.0	0.0	18.0	66 <sup>4</sup>	13 <sup>5</sup>	



## RAINFALL AND SNOW OF THE UNITED STATES.

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TABLE V.—Details of precipitation—Continued.

BOSTON, MASS.

[From November, 1870, to December, 1891.]

Month.	Monthly distribution of precipitation.	Percentage of days on which rain fell.			Classification of rainfall: Percentage of days with (or without) rain.								Heaviest rain in one day.	Greatest consecutive No. of days—		Notes.
		Mean.	Max.	Min.	.00	T. to .25	.26 to .50	.51 to 1.00	1.01 to 2.00	2.01 to 3.00	3.01 to 5.00	Over 5.00		Without rain.	With rain.	
	Per ct.												Inches.			
January .....	9.4	42.2	67.7	12.9	57.8	24.6	8.6	6.5	2.2	0.3	0.0	0.0	2.9	14	7	<sup>1</sup> 1890.
February .....	7.3	42.8	67.9	10.7	57.2	28.0	6.7	5.4	2.5	0.0	0.2	0.0	4.4	22	6	<sup>2</sup> 1871.
March .....	9.4	44.9	67.7	29.0	55.1	28.4	7.1	5.6	3.2	0.6	0.0	0.0	2.6	9	8	<sup>3</sup> August and September, 1874.
April .....	8.1	40.0	60.0	20.0	60.0	25.3	7.0	5.3	2.2	0.2	0.0	0.0	2.6	12	10	<sup>4</sup> April, 1878; September, 1890.
May .....	7.4	38.9	71.0	12.9	61.1	25.8	5.7	5.2	1.7	0.5	0.0	0.0	3.0	16	9	
June .....	7.4	39.5	60.0	23.3	60.5	28.3	6.0	3.0	1.4	0.5	0.3	0.0	4.4	15	7	
July .....	7.6	38.4	54.8	25.8	61.6	25.6	4.5	6.1	2.0	0.2	0.0	0.0	2.1	14	5	
August .....	9.4	36.1	54.8	12.9	63.9	22.2	5.8	4.6	2.4	0.5	0.6	0.0	3.6	14	6	
September .....	6.5	36.8	53.3	10.0	63.2	25.7	4.7	3.6	2.2	0.6	0.0	0.0	2.7	16	10	
October .....	9.4	36.3	58.0	23.4	63.7	23.2	4.4	4.8	3.1	0.5	0.3	0.0	4.2	13	6	
November .....	10.0	39.7	53.3	26.7	60.3	24.2	6.4	4.7	2.9	1.2	0.3	0.0	3.8	13	6	
December .....	7.6	41.6	61.3	16.1	58.4	27.7	6.6	5.2	1.8	0.3	0.0	0.0	2.6	17	6	
Year .....	100.0	39.8	50.7 <sup>1</sup>	28.8 <sup>2</sup>	60.2	25.8	6.1	5.0	2.3	0.5	0.1	0.0	4.4	25 <sup>3</sup>	10 <sup>4</sup>	

BUFFALO, N. Y.

[From November, 1870, to December, 1891, inclusive.]

January .....	7.8	72.8	90.3	48.4	27.2	62.2	6.0	3.8	0.8	0.0	0.0	0.0	1.4	8	22	<sup>1</sup> 1890.
February .....	7.0	63.7	89.3	31.0	36.3	51.1	7.8	3.8	1.0	0.0	0.0	0.0	1.5	8	15	<sup>2</sup> 1871.
March .....	7.3	65.4	83.9	29.0	34.6	55.1	6.6	2.9	0.8	0.0	0.0	0.0	1.4	8	15	<sup>3</sup> April, 1871.
April .....	6.5	48.1	66.7	20.0	51.9	37.0	7.1	3.2	0.8	0.0	0.0	0.0	1.7	22	9	<sup>4</sup> January, 1876; December, 1886, to January, 1887; February to March, 1890.
May .....	7.9	47.6	77.4	19.4	52.4	35.0	6.6	4.1	1.9	0.0	0.0	0.0	1.6	15	8	
June .....	9.4	44.1	63.3	30.0	55.9	29.8	6.8	5.9	1.4	0.2	0.0	0.0	2.9	10	11	
July .....	8.9	42.2	74.2	29.0	57.8	29.2	5.8	5.2	1.4	0.6	0.0	0.0	2.7	9	8	
August .....	8.1	38.1	67.7	16.1	61.9	27.0	4.7	3.2	2.8	0.2	0.2	0.0	3.2	11	6	
September .....	8.9	46.0	66.7	23.3	54.0	33.0	6.0	4.6	2.2	0.2	0.0	0.0	2.4	10	9	
October .....	9.9	52.1	83.9	25.8	47.9	36.3	8.1	6.1	1.1	0.5	0.0	0.0	2.4	15	13	
November .....	9.4	60.9	80.0	33.3	39.1	44.8	9.5	5.5	0.8	0.3	0.0	0.0	2.6	8	10	
December .....	8.9	69.1	90.3	45.2	30.9	54.8	9.1	4.0	1.2	0.0	0.0	0.0	1.7	8	19	
Year .....	100.0	54.2	68.5 <sup>1</sup>	34.0 <sup>2</sup>	45.8	41.3	7.0	4.4	1.3	0.2	0.02	0.0	3.2	22 <sup>3</sup>	22 <sup>4</sup>	

CAIRO, ILL.

[From July, 1871, to December, 1891, inclusive.]

January .....	9.4	48.1	67.7	22.6	51.9	34.4	5.5	4.8	2.7	0.5	0.2	0.0	4.1	10	7	<sup>1</sup> 1888.
February .....	9.4	43.7	62.1	26.8	56.3	27.4	6.2	5.7	3.5	0.9	0.0	0.0	2.7	9	11	<sup>2</sup> 1872.
March .....	8.9	44.7	64.5	29.0	55.3	29.2	6.6	5.9	2.7	0.3	0.0	0.0	2.4	15	7	<sup>3</sup> September and October, 1891.
April .....	8.7	41.0	56.7	26.6	59.0	27.0	6.2	4.2	3.5	0.1	0.0	0.0	2.5	12	7	<sup>4</sup> June, 1888.
May .....	8.7	40.1	61.3	19.4	59.9	25.6	6.6	5.6	2.1	0.0	0.2	0.0	4.2	13	8	
June .....	10.3	45.4	70.0	16.6	54.6	29.1	6.7	5.0	3.7	0.7	0.2	0.0	3.3	12	13	
July .....	8.2	33.2	54.8	3.2	66.8	19.8	6.3	4.0	2.3	0.8	0.0	0.0	2.7	16	7	
August .....	6.6	28.6	54.8	9.7	71.4	17.7	4.0	4.9	1.5	0.5	0.0	0.0	3.0	16	6	
September .....	5.7	28.3	66.6	3.3	71.7	19.4	3.2	3.7	1.9	0.1	0.0	0.0	2.9	27	8	
October .....	6.4	28.6	64.5	9.7	71.2	17.5	4.5	5.5	0.8	0.3	0.2	0.0	3.1	15	6	
November .....	10.0	38.7	63.3	13.3	61.3	22.8	5.6	5.6	3.9	0.8	0.0	0.0	2.9	12	7	
December .....	7.7	41.3	58.1	16.1	58.7	29.6	5.1	3.7	2.6	0.3	0.0	0.0	2.5	13	10	
Year .....	100.0	38.5	47.3 <sup>1</sup>	26.8 <sup>2</sup>	61.5	25.0	5.5	4.9	2.6	0.4	0.1	0.0	4.2	26 <sup>3</sup>	13 <sup>4</sup>	

CAMP VERDE, ARIZ.

[From January, 1870, to September, 1890, inclusive.]

January .....	7.6	11.2	32.3	0.0	88.8	7.7	1.4	1.2	0.9	0.0	0.0	0.0	1.9	31	6	<sup>1</sup> 1888.
February .....	7.6	14.8	34.5	0.0	85.2	10.5	2.5	1.7	0.2	0.0	0.0	0.0	1.3	28	5	<sup>2</sup> 1871 and 1875.
March .....	8.4	13.2	41.9	0.0	86.8	8.6	2.8	1.2	0.6	0.0	0.0	0.0	1.4	31	4	<sup>3</sup> 1878.
April .....	4.6	11.0	23.3	0.0	89.0	7.8	2.4	0.6	0.2	0.0	0.0	0.0	1.1	30	3	<sup>4</sup> April 13 to July 8, 1879.
May .....	2.3	6.0	25.8	0.0	94.0	5.0	0.5	0.5	0.0	0.0	0.0	0.0	0.9	31	5	<sup>5</sup> August, 1878.
June .....	1.5	4.1	20.0	0.0	95.9	3.7	0.2	0.3	0.0	0.0	0.0	0.0	1.0	30	3	
July .....	13.8	22.7	38.7	0.0	77.3	16.6	2.9	2.2	1.1	0.0	0.0	0.0	1.7	31	4	
August .....	21.4	24.0	38.7	6.5	76.0	15.4	3.5	2.8	2.0	0.3	0.0	0.0	2.6	23	7	
September .....	8.4	9.4	23.3	0.0	90.6	4.6	2.4	1.3	1.1	0.0	0.0	0.0	1.8	30	4	
October .....	5.3	8.7	19.4	0.0	91.3	5.5	1.9	0.6	0.6	0.0	0.0	0.0	1.5	31	6	
November .....	7.6	9.5	46.7	0.0	90.5	6.5	1.0	1.1	0.8	0.0	0.0	0.0	1.7	30	6	
December .....	11.5	14.7	48.4	0.0	85.3	7.1	3.7	3.1	0.8	0.0	0.0	0.0	1.6	31	5	
Year .....	100.0	12.4	21.6 <sup>1</sup>	0.5 <sup>2</sup>	87.6	8.2	2.1	1.4	0.7	0.02	0.0	0.0	2.6 <sup>3</sup>	87 <sup>4</sup>	7 <sup>5</sup>	

CEDAR KEYS, FLA.

[From November, 1879, to March, 1890, inclusive.]

January .....	7.5	34.3	51.6	12.9	65.7	20.8	5.6	3.5	3.5	0.6	0.3	0.0	3.6	20	8	<sup>1</sup> 1888.
February .....	5.6	28.0	48.3	7.1	72.0	20.2	2.3	2.3	1.9	1.0	0.3	0.0	3.3	23	7	<sup>2</sup> 1883.
March .....	6.6	29.6	58.1	16.1	70.4	19.9	2.3	2.9	3.9	0.6	0.0	0.0	2.5	9	7	<sup>3</sup> November, 1889; January, 1890.
April .....	4.8	22.0	36.7	10.0	78.0	14.3	1.7	4.0	1.7	0.0	0.3	0.0	3.8	23	3	<sup>4</sup> August and September, 1888.
May .....	4.4	27.1	45.1	9.7	72.9	19.1	2.9	2.9	1.9	0.0	0.3	0.0	3.1	17	6	
June .....	13.1	44.0	53.3	33.3	56.0	23.7	5.4	7.3	5.0	2.3	0.3	0.0	3.4	10	8	
July .....	16.8	52.3	71.0	32.3	47.7	28.4	7.1	7.7	5.8	1.9	1.3	0.0	4.5	7	10	
August .....	14.8	49.0	61.3	32.3	51.0	27.4	4.8	8.4	6.1	1.3	1.0	0.0	4.9	7	7	
September .....	10.4	37.0	63.3	16.7	63.0	23.4	4.3	3.3	3.7	1.7	0.3	0.3	7.0	22	17	
October .....	5.4	28.4	42.0	9.7	71.6	20.3	2.6	2.6	1.6	1.3	0.0	0.0	2.9	16	6	
November .....	4.8	25.0	60.0	6.7	75.0	16.0	3.4	3.1	2.2	0.3	0.0	0.0	2.7	18	8	
December .....	5.8	29.3	48.4	0.0	70.7	20.5	3.2	3.8	1.2	0.0	0.6	0.0	3.7	31	5	
Year .....	100.0	33.9	40.3 <sup>1</sup>	25.5 <sup>2</sup>	66.1	21.2	3.8	4.3	3.2	0.9	0.4	0.02	7.0	48 <sup>3</sup>	18 <sup>4</sup>	

## RAINFALL AND SNOW OF THE UNITED STATES.

TABLE V.—Details of precipitation—Continued.

CHARLESTON, S. C.

[From January, 1871, to December, 1891, inclusive.]

Month.	Monthly distribution of precipitation.	Percentage of days on which rain fell.			Classification of rainfall: Percentage of days with (or without) rain.								Heaviest rain in one day.	Greatest consecutive No. of days—		Notes.
		Mean.	Max.	Min.	.00	T. to .25	.26 to .50	.51 to 1.00	1.01 to 2.00	2.01 to 3.00	3.01 to 5.00	Over 5.00		Without rain.	With rain.	
January.....	7.1	36.9	61.3	12.9	63.1	22.5	5.1	6.3	2.0	0.8	0.2	0.0	3.8	18	7	<sup>1</sup> 1887.
February.....	5.8	37.8	75.0	17.9	62.2	23.8	6.1	4.7	2.9	0.3	0.0	0.0	2.1	13	10	<sup>2</sup> 1872.
March.....	7.3	34.3	48.4	22.5	65.7	19.8	5.9	4.6	3.2	0.6	0.2	0.0	3.1	15	6	<sup>3</sup> November and December, 1889.
April.....	7.1	29.5	43.3	10.0	70.5	17.9	3.5	5.1	2.1	0.3	0.3	0.1	8.3	13	6	<sup>4</sup> September, 1877; February, 1887; July, 1890.
May.....	7.3	30.6	61.3	12.9	69.4	17.1	5.9	4.3	1.8	1.1	0.2	0.2	5.1	17	9	
June.....	9.0	39.4	63.3	16.7	60.6	23.8	4.4	6.7	2.9	1.0	0.6	0.0	4.9	14	9	
July.....	13.1	39.8	61.3	16.1	60.2	21.2	4.9	5.0	5.7	1.7	1.1	0.2	5.1	18	10	
August.....	12.9	42.5	58.1	32.3	57.5	25.4	4.7	4.1	4.6	2.2	0.9	0.2	5.4	10	8	
September.....	10.8	38.6	66.7	20.0	61.4	19.8	6.7	5.7	4.0	1.7	0.5	0.2	5.4	15	10	
October.....	7.8	27.2	48.4	3.2	72.8	16.8	3.1	3.1	2.4	0.8	0.8	0.2	6.2	25	8	
November.....	5.7	27.5	60.0	13.3	72.5	17.1	4.8	2.7	2.0	0.2	0.5	0.2	5.3	19	6	
December.....	6.1	31.8	58.1	3.2	68.2	21.6	2.6	4.5	2.3	0.6	0.2	0.0	3.5	30	8	
Year.....	100.0	34.7	41.9 <sup>1</sup>	26.2 <sup>2</sup>	65.3	20.6	4.9	4.7	3.0	0.9	0.5	0.1	8.3	34 <sup>3</sup>	10 <sup>4</sup>	

CHARLOTTE, N. C.

[From January, 1879, to December, 1891, inclusive.]

January.....	9.6	46.7	71.0	35.5	53.3	26.8	7.7	7.5	4.5	0.2	0.0	0.0	2.2	10	9	<sup>1</sup> 1888, 1891.
February.....	8.6	40.9	60.7	21.4	59.1	22.6	7.9	5.7	4.4	0.3	0.0	0.0	2.1	12	7	<sup>2</sup> 1881.
March.....	9.6	40.2	58.0	25.8	59.8	19.1	7.9	9.5	3.5	0.2	0.0	0.0	2.6	11	11	<sup>3</sup> May, 1886.
April.....	6.8	35.1	46.7	23.3	64.9	21.2	5.6	5.4	2.1	0.8	0.0	0.0	2.4	11	7	<sup>4</sup> September and October, 1886.
May.....	8.7	41.7	71.0	18.1	58.3	26.0	5.5	6.7	2.5	0.5	0.5	0.0	4.8	13	9	<sup>5</sup> August and September, 1888.
June.....	8.7	44.1	60.0	26.7	55.9	27.4	5.4	7.7	2.3	1.3	0.0	0.0	2.8	17	11	
July.....	10.9	45.7	67.7	29.0	54.3	26.8	6.7	7.0	3.2	1.3	0.7	0.0	4.2	10	11	
August.....	10.4	41.7	64.5	19.4	58.3	24.8	5.2	6.2	4.0	1.0	0.5	0.0	3.2	13	9	
September.....	5.9	30.8	70.0	16.7	69.2	21.5	3.4	3.6	1.3	0.5	0.5	0.0	3.6	18	11	
October.....	6.7	29.0	45.2	6.5	71.0	17.8	4.0	2.5	3.7	1.0	0.0	0.0	2.8	18	8	
November.....	5.9	33.1	53.3	16.7	66.9	20.5	6.6	3.6	2.1	0.3	0.0	0.0	2.8	13	7	
December.....	8.2	38.0	48.4	16.1	62.0	23.8	4.7	6.2	2.8	0.5	0.0	0.0	2.4	12	7	
Year.....	100.0	38.9	45.2 <sup>1</sup>	31.8 <sup>2</sup>	61.1	23.2	5.9	5.9	3.0	0.7	0.2	0.0	4.8 <sup>3</sup>	25 <sup>4</sup>	13 <sup>5</sup>	

CHATTANOOGA, TENN.

[From February, 1879, to December, 1891, inclusive.]

January.....	12.3	59.1	74.2	35.5	40.9	35.2	8.6	9.1	4.6	1.3	0.3	0.0	3.5	7	14	<sup>1</sup> 1889.
February.....	10.4	55.3	75.0	31.0	44.7	32.2	7.6	9.5	4.9	0.8	0.3	0.0	3.2	10	10	<sup>2</sup> 1886.
March.....	11.6	51.4	71.1	38.7	48.6	31.3	6.9	6.5	5.0	1.2	0.2	0.2	6.0	13	9	<sup>3</sup> September and October, 1879.
April.....	7.9	46.9	60.0	30.0	53.1	30.3	6.7	7.2	1.5	1.3	0.0	0.0	3.0	10	7	<sup>4</sup> November, 1889.
May.....	7.2	44.4	61.3	25.8	55.6	29.8	6.2	5.2	2.5	0.7	0.0	0.0	2.6	13	12	
June.....	8.1	53.3	73.3	26.7	46.7	36.4	5.4	8.5	2.1	1.0	0.0	0.0	2.9	10	13	
July.....	6.9	49.6	61.3	35.5	50.4	35.2	6.7	4.0	3.7	0.0	0.0	0.0	1.9	8	7	
August.....	7.4	49.9	74.2	29.0	50.1	35.5	6.0	5.2	3.2	0.0	0.0	0.0	2.0	10	10	
September.....	7.4	40.3	66.7	16.7	59.7	25.1	5.4	4.6	4.9	0.3	0.0	0.0	2.1	17	6	
October.....	5.4	36.7	67.7	16.1	63.3	24.1	5.2	5.2	2.2	0.0	0.0	0.0	1.8	21	10	
November.....	7.5	40.7	86.7	13.3	59.2	25.9	5.4	4.9	3.8	0.8	0.0	0.0	3.0	13	19	
December.....	7.9	46.7	64.5	29.0	53.3	29.8	5.7	7.4	2.7	1.0	0.0	0.0	2.9	8	5	
Year.....	100.0	47.9	52.9 <sup>1</sup>	46.3 <sup>2</sup>	52.1	30.9	6.3	6.4	3.4	0.7	0.1	0.02	6.0	25 <sup>3</sup>	19 <sup>4</sup>	

CHEYENNE, WYO.

[From December, 1870, to December, 1891, inclusive.]

January.....	3.3	23.7	41.9	9.7	76.3	22.9	0.3	0.5	0.0	0.0	0.0	0.0	0.9	20	6	<sup>1</sup> 1888.
February.....	3.3	26.0	41.4	17.2	74.0	24.9	0.9	0.2	0.0	0.0	0.0	0.0	0.5	20	4	<sup>2</sup> 1871.
March.....	5.7	29.5	58.0	6.5	70.5	27.0	2.0	0.5	0.0	0.0	0.0	0.0	0.9	21	5	<sup>3</sup> 1876.
April.....	12.4	37.3	60.0	16.7	62.7	30.6	5.1	1.3	0.3	0.0	0.0	0.0	1.3	16	8	<sup>4</sup> September and October, 1879.
May.....	18.2	44.2	80.7	9.7	55.8	35.7	4.5	3.2	0.8	0.0	0.0	0.0	1.9	23	12	<sup>5</sup> May and June, 1889.
June.....	12.4	35.1	53.3	13.3	64.9	28.4	4.3	1.8	0.6	0.0	0.0	0.0	1.2	17	9	
July.....	14.1	39.9	58.0	12.9	60.1	33.3	4.6	1.5	0.5	0.0	0.0	0.0	1.4	14	8	
August.....	12.4	40.7	61.3	12.9	59.3	35.3	2.9	2.2	0.3	0.0	0.0	0.0	1.4	12	8	
September.....	8.3	22.9	46.7	0.0	77.1	18.9	2.1	1.7	0.2	0.0	0.0	0.0	1.1	30	6	
October.....	5.7	22.1	41.9	3.2	77.9	19.3	1.5	1.1	0.2	0.0	0.0	0.0	1.4	29	5	
November.....	2.5	23.0	43.3	10.0	77.0	22.0	0.8	0.2	0.0	0.0	0.0	0.0	0.5	22	5	
December.....	1.7	21.4	51.6	6.5	78.6	21.2	0.2	0.0	0.0	0.0	0.0	0.0	0.3	28	5	
Year.....	100.0	30.5	39.6 <sup>1</sup>	20.5 <sup>2</sup>	69.5	26.7	2.4	1.2	0.2	0.0	0.0	0.0	1.9 <sup>3</sup>	43 <sup>4</sup>	19 <sup>5</sup>	

CHICAGO, ILL.

[From November, 1870, to December, 1891, inclusive.]

January.....	6.2	47.2	74.2	22.6	52.8	38.1	5.5	2.8	0.8	0.0	0.0	0.0	1.5	12	7	<sup>1</sup> 1887.
February.....	6.5	47.4	71.4	10.7	52.6	37.1	5.7	3.0	1.6	0.0	0.0	0.0	1.9	21	12	<sup>2</sup> 1872.
March.....	7.0	50.2	71.0	29.0	50.0	40.2	6.2	2.3	1.2	0.0	0.2	0.0	3.2	10	12	<sup>3</sup> November and December, 1870, and February, 1877.
April.....	8.8	46.8	63.3	30.0	53.2	34.4	5.2	4.9	2.1	0.2	0.0	0.0	2.4	10	9	<sup>4</sup> July and August, 1880.
May.....	10.2	44.1	64.5	29.6	55.9	30.1	4.9	6.5	2.0	0.6	0.0	0.0	2.5	16	10	
June.....	10.2	45.6	70.0	20.0	54.4	31.4	5.6	5.9	2.2	0.5	0.0	0.0	2.9	11	10	
July.....	10.4	37.2	51.6	22.6	62.8	24.3	4.8	5.2	2.3	0.5	0.1	0.0	4.1	13	7	
August.....	10.0	35.5	61.3	22.6	64.5	24.9	4.8	3.7	2.0	0.0	0.0	0.1	5.6	16	10	
September.....	7.9	36.2	60.0	10.0	63.8	25.8	4.4	3.8	2.0	0.1	0.1	0.0	3.4	14	9	
October.....	9.0	41.0	61.3	12.9	59.0	27.8	5.4	5.5	2.0	0.3	0.0	0.0	2.2	15	8	
November.....	7.6	46.4	76.7	6.7	53.6	34.8	6.5	4.0	0.8	0.0	0.3	0.0	3.3	16	12	
December.....	6.2	50.0	71.0	29.0	50.0	41.5	4.1	3.2	1.0	0.2	0.0	0.0	2.5	15	8	
Year.....	100.0	44.0	53.4 <sup>1</sup>	30.3 <sup>2</sup>	56.0	32.5	5.3	4.2	1.7	0.2	0.1	0.01	5.6	21 <sup>3</sup>	17 <sup>4</sup>	

## RAINFALL AND SNOW OF THE UNITED STATES.

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TABLE V.—Details of precipitation—Continued.

## CINCINNATI, OHIO.

[From November, 1870, to December, 1891, inclusive.]

Month.	Monthly distribution of precipitation.	Percentage of days on which rain fell.			Classification of rainfall: Percentage of days with (or without) rain.								Heaviest rain in one day.	Greatest consecutive No. of days—		Notes.
		Mean.	Max.	Min.	.00	T. to .50	.25 to .50	.51 to 1.00	1.01 to 2.00	2.01 to 3.00	3.01 to 5.00	Over 5.00		Without rain.	With rain.	
January	8.4	56.5	77.4	19.4	43.5	43.0	6.6	4.8	1.8	0.3	0.0	0.0	Inches. 3.0	7	15	1890. 1871. August, 1889. January, 1873.
February	9.1	59.4	72.4	14.3	49.6	33.9	7.6	5.4	3.4	0.2	0.0	0.0	2.7	12	10	
March	8.7	53.9	74.2	35.5	46.1	39.6	8.6	5.2	1.2	0.3	0.0	0.0	2.5	11	8	
April	7.2	46.8	73.3	23.2	53.2	34.3	6.7	4.3	1.6	0.0	0.0	0.0	1.9	13	8	
May	8.2	45.8	71.0	25.6	54.2	32.4	6.8	4.0	2.2	0.5	0.0	0.0	2.8	16	8	
June	11.3	49.8	70.0	20.0	50.2	30.2	8.0	8.6	2.4	0.5	0.0	0.0	2.6	11	10	
July	8.9	43.0	74.2	16.2	57.0	28.5	6.1	5.5	2.6	0.2	0.0	0.0	2.4	13	8	
August	9.6	39.0	58.1	19.4	61.0	24.8	5.1	5.4	3.1	0.6	0.0	0.0	2.6	19	11	
September	5.8	35.9	50.0	16.7	64.1	25.6	5.1	4.0	1.3	0.0	0.0	0.0	2.0	14	6	
October	6.5	37.9	67.7	16.1	62.1	26.6	5.5	4.9	0.6	0.3	0.0	0.0	2.2	13	9	
November	8.4	47.2	73.3	20.0	52.8	32.9	5.9	5.6	2.9	0.0	0.0	0.0	1.8	13	10	
December	7.9	50.4	74.2	32.3	49.6	39.3	5.1	3.8	1.5	0.7	0.0	0.0	2.7	12	11	
Year	100.0	46.4	69.6 <sup>1</sup>	21.6 <sup>2</sup>	53.6	32.5	6.4	5.1	2.0	0.3	0.0	0.0	3.0	19 <sup>3</sup>	15 <sup>4</sup>	

## CLEVELAND, OHIO.

[From November, 1870, to December, 1891, inclusive.]

January	7.4	65.6	87.1	25.8	34.4	55.9	6.0	3.2	0.5	0.0	0.0	0.0	1.8	8	21	1890. 1871. 1883. August, 1881. December, 1887; January, 1888.
February	7.7	61.2	86.2	25.0	38.8	49.2	5.6	4.5	1.7	0.0	0.2	0.0	3.6	7	9	
March	7.7	61.9	87.1	35.5	38.1	50.4	7.2	3.1	1.2	0.0	0.0	0.0	1.4	10	15	
April	6.3	48.9	70.0	22.6	51.1	39.0	5.7	3.7	0.5	0.0	0.0	0.0	1.2	10	9	
May	8.3	46.7	80.6	22.6	53.3	32.4	7.2	4.7	2.2	0.2	0.0	0.0	2.1	9	13	
June	10.6	46.0	66.7	26.7	53.3	32.4	7.3	4.3	2.5	0.6	0.2	0.0	3.1	13	9	
July	10.6	42.4	58.1	25.8	54.0	31.1	6.9	3.5	1.8	1.1	0.0	0.0	2.7	12	8	
August	8.2	37.2	71.0	16.1	62.8	26.7	4.4	3.1	2.5	0.3	0.2	0.0	3.5	18	11	
September	10.1	42.7	56.7	26.7	57.3	28.2	5.6	6.3	2.1	0.5	0.0	0.0	2.3	10	10	
October	8.0	50.1	83.9	16.1	57.3	37.8	7.7	3.8	0.6	0.2	0.0	0.0	2.4	11	9	
November	8.0	59.2	80.0	33.3	40.8	47.1	7.7	3.1	1.1	0.2	0.0	0.0	2.2	8	11	
December	6.9	55.0	87.1	48.4	35.0	55.2	5.9	3.2	0.7	0.0	0.0	0.0	1.9	7	20	
Year	100.0	52.2	63.0 <sup>1</sup>	35.9 <sup>2</sup>	47.8	40.2	6.4	3.9	1.4	0.3	0.05	0.0	3.6 <sup>3</sup>	18 <sup>4</sup>	33 <sup>5</sup>	

## COLUMBUS, OHIO.

[From July, 1878, to December, 1891, inclusive.]

January	8.4	63.3	83.9	45.1	36.7	50.4	6.7	5.0	1.2	0.0	0.0	0.0	2.0	7	12	1888. 1891. September and October, 1885. July, 1883.
February	9.1	60.8	82.7	39.0	39.2	45.5	7.1	6.0	1.9	0.3	0.0	0.0	2.2	6	13	
March	8.1	60.0	74.2	45.2	40.0	46.6	6.5	5.7	1.2	0.0	0.0	0.0	1.7	7	11	
April	7.2	50.5	86.6	26.6	49.5	38.0	5.1	5.6	1.5	0.3	0.0	0.0	2.1	9	11	
May	11.4	49.9	71.0	25.8	50.1	31.3	5.4	5.7	3.2	0.3	0.0	0.0	2.6	10	9	
June	9.1	51.0	76.6	30.0	49.0	35.0	7.9	6.2	1.5	0.5	0.0	0.0	2.5	10	12	
July	8.9	42.2	90.3	29.0	57.8	32.1	3.2	3.9	2.1	0.9	0.0	0.0	2.8	12	22	
August	8.1	40.3	58.1	22.6	59.7	26.3	4.4	6.2	1.8	0.5	0.0	0.0	2.1	13	10	
September	6.7	39.3	80.0	13.3	59.7	28.3	5.5	4.3	1.4	0.0	0.0	0.0	1.9	16	8	
October	7.2	42.9	87.1	19.4	57.1	30.7	7.1	3.7	0.9	0.5	0.0	0.0	2.2	14	13	
November	8.4	49.0	76.6	35.5	51.0	35.5	6.4	5.0	1.9	0.2	0.0	0.0	2.8	11	14	
December	7.4	55.3	67.7	16.1	44.7	44.2	6.2	4.2	0.7	0.0	0.0	0.0	1.4	10	12	
Year	100.0	50.4	70.8 <sup>1</sup>	40.5 <sup>2</sup>	49.6	37.0	6.2	5.3	1.6	0.3	0.0	0.0	2.8	18 <sup>3</sup>	22 <sup>4</sup>	

## DAVENPORT, IOWA.

[From April, 1872, to December, 1891, inclusive.]

January	5.3	42.3	74.2	12.9	57.7	35.7	3.4	2.2	1.0	0.0	0.0	0.0	1.8	10	7	1884. 1879. August and September, 1888. June, 1882.
February	4.7	42.2	69.0	14.3	57.8	35.4	3.6	2.6	0.2	0.4	0.0	0.0	2.9	16	8	
March	6.5	42.6	61.3	25.8	57.4	33.9	5.1	2.4	1.2	0.0	0.0	0.0	1.9	12	8	
April	8.0	41.8	60.0	30.0	58.2	30.5	5.8	4.1	1.0	0.2	0.2	0.0	3.1	10	6	
May	12.4	46.6	74.2	29.0	53.4	29.5	7.7	6.0	2.7	0.7	0.0	0.0	2.8	12	9	
June	12.4	51.0	73.3	26.6	49.0	32.5	8.5	6.8	2.8	0.2	0.2	0.0	3.5	9	11	
July	10.6	34.2	51.6	16.1	65.8	20.8	5.5	4.2	2.9	0.4	0.2	0.2	5.2	14	7	
August	11.2	37.7	54.8	16.0	62.3	25.5	4.8	4.2	2.4	0.5	0.3	0.0	4.8	15	9	
September	9.4	36.0	56.6	16.6	64.0	23.5	4.6	5.0	2.5	0.2	0.2	0.0	3.7	15	7	
October	8.9	35.6	64.5	16.1	64.4	23.5	5.5	4.5	1.4	0.5	0.2	0.0	4.1	15	8	
November	5.9	37.3	53.3	20.0	62.7	28.8	4.3	2.8	1.2	0.2	0.0	0.0	2.1	13	6	
December	4.7	42.9	71.0	19.3	57.1	36.5	3.7	2.1	0.6	0.0	0.0	0.0	1.9	14	8	
Year	100.0	40.8	49.3 <sup>1</sup>	34.2 <sup>2</sup>	59.2	29.7	5.2	3.9	1.6	0.3	0.1	0.02	5.2	24 <sup>3</sup>	11 <sup>4</sup>	

## DENVER, COLO.

[From December, 1871, to December, 1891, inclusive.]

January	4.8	19.5	35.5	6.4	80.5	17.4	1.6	0.3	0.2	0.0	0.0	0.0	1.2	22	4	1891. 1873. September and October, 1873. April and May, 1885.
February	3.4	22.5	35.7	7.0	77.5	20.5	1.6	0.4	0.0	0.0	0.0	0.0	0.7	18	6	
March	6.8	26.6	51.6	9.7	73.4	23.0	2.3	1.1	0.2	0.0	0.0	0.0	1.1	19	6	
April	14.4	35.0	60.0	13.3	65.0	26.3	4.8	3.2	0.5	0.2	0.0	0.0	2.3	13	12	
May	18.5	41.6	70.9	9.7	58.4	32.3	5.2	2.6	1.0	0.3	0.0	0.2	6.5	17	12	
June	9.6	33.8	73.3	6.6	66.2	29.0	2.9	0.9	1.0	0.0	0.0	0.0	1.8	15	9	
July	10.3	39.2	67.7	9.7	60.8	34.2	2.3	1.3	1.4	0.0	0.0	0.0	1.6	13	9	
August	10.3	41.3	67.7	19.3	58.7	35.0	3.7	2.0	0.6	0.0	0.0	0.0	1.3	13	10	
September	6.2	24.4	53.3	3.3	75.6	21.0	2.2	1.2	0.0	0.0	0.0	0.0	0.9	24	5	
October	5.5	20.0	38.7	6.4	80.0	16.5	2.7	0.8	0.0	0.0	0.0	0.0	0.9	25	6	
November	5.4	20.7	46.6	6.6	79.3	17.8	2.4	0.5	0.0	0.0	0.0	0.0	0.9	22	5	
December	4.8	20.4	48.4	10.0	79.6	17.8	1.8	0.5	0.2	0.0	0.0	0.0	1.7	31	5	
Year	100.0	28.7	40.0 <sup>1</sup>	17.5 <sup>2</sup>	71.3	24.2	2.8	1.2	0.4	0.04	0.0	0.02	6.5	39 <sup>3</sup>	15 <sup>4</sup>	

## RAINFALL AND SNOW OF THE UNITED STATES.

TABLE V.—Details of precipitation—Continued.

FORT BUFORD, N. DAK.

[From February, 1879, to December, 1891, inclusive.]

Month.	Monthly dis-tribution of precipitation.	Percentage of days on which rain fell.			Classification of rainfall: Percentage of days with (or without) rain.								Heaviest rain in one day.	Greatest consecutive No. of days—		Notes.
		Mean.	Max.	Min.	.00	T. to .25	.26 to .50	.51 to 1.00	1.01 to 2.00	2.01 to 3.01	3.01 to 5.00	Over 5.00		With-out rain.	With rain.	
January .....	Per ct.												Inches.			
February .....	3.7	36.6	51.6	19.4	63.4	34.7	1.6	0.0	0.3	0.0	0.0	0.0	1.4	10	10	<sup>1</sup> 1884.
March .....	3.7	42.2	64.3	17.9	57.8	42.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3	11	7	<sup>2</sup> 1882.
April .....	3.7	35.7	51.6	20.0	63.3	36.0	0.5	0.2	0.0	0.0	0.0	0.0	0.6	14	9	<sup>3</sup> 1885.
May .....	16.4	35.6	70.0	20.0	64.4	31.0	2.3	2.1	0.3	0.0	0.0	0.0	1.1	12	10	<sup>4</sup> September 15 to October 9, 1885.
June .....	16.1	39.7	64.5	19.4	60.3	33.0	3.5	2.2	1.0	0.0	0.0	0.0	1.2	14	10	<sup>5</sup> June, 1885.
July .....	20.5	51.3	70.0	30.0	48.3	38.2	5.9	4.9	1.8	0.3	0.3	0.0	3.2	8	11	
August .....	14.7	40.9	61.3	19.4	59.1	33.6	3.5	3.3	0.3	0.3	0.0	0.0	2.1	12	8	
September ..	6.6	29.0	45.2	12.9	71.0	24.1	3.0	1.5	0.5	0.0	0.0	0.0	1.5	22	6	
October .....	6.6	23.6	43.3	3.3	76.4	20.0	2.6	0.5	0.5	0.0	0.0	0.0	1.4	17	9	
November .....	6.6	36.7	54.8	3.2	63.3	33.0	2.0	1.5	0.2	0.0	0.0	0.0	1.1	21	9	
December .....	3.7	31.3	50.0	6.7	68.7	30.8	0.3	0.0	0.3	0.0	0.0	0.0	1.1	23	9	
Year .....	3.7	33.7	54.8	16.1	66.3	32.0	1.5	0.2	0.0	0.0	0.0	0.0	0.7	19	6	
Year .....	100.0	36.4	43.2 <sup>1</sup>	29.3 <sup>2</sup>	63.6	32.4	2.2	1.4	0.4	0.05	0.02	0.0	3.2 <sup>3</sup>	25 <sup>4</sup>	11 <sup>5</sup>	

FORT CUSTER, MONT.

[From August, 1879, to December, 1891, inclusive.]

January .....	6.2	28.5	61.3	9.7	71.5	26.7	0.9	0.9	0.0	0.0	0.0	0.0	0.9	19	7	No record from November 23 to December 31, 1881.
February .....	3.9	28.6	42.8	7.1	71.4	28.3	0.3	0.0	0.0	0.0	0.0	0.0	0.3	16	4	No record from January 1 to June 30, 1883, inclusive.
March .....	7.7	26.7	45.1	3.2	73.3	25.5	0.9	0.3	0.0	0.0	0.0	0.0	0.6	29	6	<sup>1</sup> 1891.
April .....	8.6	27.3	36.6	23.3	72.7	23.7	2.4	0.6	0.6	0.0	0.0	0.0	1.3	17	7	<sup>2</sup> 1885.
May .....	15.6	36.6	67.7	19.3	63.4	28.7	5.0	2.0	0.9	0.0	0.0	0.0	1.9	9	6	<sup>3</sup> October and November, 1891.
June .....	21.9	35.4	56.6	20.0	64.6	23.6	6.7	3.3	1.2	0.6	0.0	0.0	2.3	14	6	<sup>4</sup> January, 1881; April, 1884.
July .....	7.8	21.5	29.0	9.7	78.5	18.0	1.9	1.6	0.0	0.0	0.0	0.0	1.0	16	5	
August .....	8.6	18.6	32.2	6.4	81.4	13.9	3.2	1.3	0.2	0.0	0.0	0.0	1.4	27	6	
September ..	6.3	18.5	40.0	3.3	81.4	15.1	2.6	0.8	0.0	0.0	0.0	0.0	0.5	25	5	
October .....	7.8	21.6	41.9	3.3	78.4	17.5	3.0	0.8	0.0	0.0	0.3	0.0	3.8	29	5	
November .....	3.1	16.9	46.6	6.6	83.1	15.0	1.1	0.0	0.2	0.0	0.0	0.0	1.2	24	4	
December .....	6.3	27.4	63.2	12.9	72.6	25.3	1.9	0.2	0.0	0.0	0.0	0.0	0.5	19	6	
Year .....	100.0	25.6	29.8 <sup>1</sup>	14.2 <sup>2</sup>	74.4	21.8	2.5	1.0	0.3	0.05	0.02	0.0	3.8	39 <sup>3</sup>	7 <sup>4</sup>	

FORT ELLIOTT, TEX.

[From October, 1879, to September, 1890, inclusive.]

January .....	2.6	17.6	32.1	7.1	82.4	15.5	1.2	0.3	0.6	0.0	0.0	0.0	1.4	26	6	<sup>1</sup> 1884.
February .....	2.2	19.0	32.1	6.9	81.0	17.5	0.6	0.6	0.3	0.0	0.0	0.0	1.1	20	3	<sup>2</sup> 1889.
March .....	2.6	19.4	32.3	6.5	80.6	17.9	0.6	0.6	0.3	0.0	0.0	0.0	1.1	26	4	<sup>3</sup> November and December, 1889; January, 1890.
April .....	11.2	25.2	50.0	6.7	74.8	13.7	6.1	3.0	2.1	0.3	0.0	0.0	2.8	27	7	<sup>4</sup> August, 1884.
May .....	18.9	33.4	51.6	12.9	66.6	18.7	6.2	4.7	2.3	0.9	0.6	0.0	3.3	14	6	
June .....	13.8	27.3	46.7	10.0	72.7	15.8	4.2	4.2	2.2	0.9	0.0	0.0	2.4	14	7	
July .....	9.9	27.0	38.7	12.9	73.0	17.9	5.3	2.3	0.9	0.3	0.3	0.0	3.5	18	6	
August .....	14.2	30.5	48.4	12.9	69.5	17.9	5.0	5.0	2.6	0.0	0.0	0.0	1.8	14	9	
September ..	7.8	19.1	30.0	6.7	80.9	12.5	5.0	2.4	0.9	0.3	0.0	0.0	2.1	20	6	
October .....	11.2	22.1	51.6	6.5	77.9	14.1	2.9	2.1	2.7	0.3	0.0	0.0	2.3	18	5	
November .....	2.6	13.6	30.0	0.0	86.4	11.2	1.2	1.2	0.0	0.0	0.0	0.0	0.7	30	4	
December .....	3.0	15.5	29.0	0.0	84.5	12.6	2.3	0.3	0.3	0.0	0.0	0.0	1.6	31	4	
Year .....	100.0	22.5	27.3 <sup>1</sup>	18.1 <sup>2</sup>	77.5	15.5	3.2	2.2	1.3	0.2	0.1	0.0	3.5	48 <sup>3</sup>	9 <sup>4</sup>	

FORT SMITH, ARK.

[From June, 1882, to December, 1891, inclusive.]

January .....	5.8	33.0	51.6	9.7	67.0	22.6	5.4	2.8	1.8	0.4	0.0	0.0	2.1	14	5	<sup>1</sup> 1889.
February .....	9.0	30.3	42.9	10.7	69.7	16.9	3.9	4.7	2.4	2.0	0.4	0.0	3.8	21	6	<sup>2</sup> 1885.
March .....	6.9	34.4	45.2	16.1	65.6	22.2	7.1	2.9	2.2	0.0	0.0	0.0	1.8	11	5	<sup>3</sup> August, 1890.
April .....	11.5	38.5	51.3	29.0	61.5	23.0	6.7	4.1	3.3	0.7	0.7	0.0	4.3	13	8	<sup>4</sup> March and April, 1887.
May .....	9.4	33.7	45.3	16.1	66.3	19.3	5.4	5.0	3.6	0.4	0.0	0.0	2.2	10	5	<sup>5</sup> June, 1889.
June .....	9.6	39.7	66.7	23.3	60.3	22.0	6.7	7.3	3.4	0.3	0.0	0.0	2.1	12	12	
July .....	9.2	32.6	45.2	19.4	67.4	19.0	4.5	4.9	2.9	1.3	0.0	0.0	2.4	11	7	
August .....	8.3	28.4	45.2	16.1	71.6	17.1	4.5	2.9	2.6	1.0	0.0	0.3	5.1	17	7	
September ..	8.3	28.0	63.3	10.0	72.0	16.3	5.3	1.0	4.7	0.7	0.0	0.0	2.1	17	6	
October .....	6.4	25.2	48.4	9.7	74.8	15.5	3.5	3.9	2.0	0.3	0.0	0.0	2.7	17	5	
November .....	9.2	31.2	43.3	13.3	68.8	17.5	5.0	4.7	3.0	1.0	0.0	0.0	2.5	21	5	
December .....	6.4	25.5	41.9	9.7	74.5	16.5	2.6	3.2	3.2	0.0	0.0	0.0	2.0	16	6	
Year .....	100.0	31.7	35.6 <sup>1</sup>	24.7 <sup>2</sup>	68.3	19.0	5.0	4.0	2.9	0.7	0.09	0.02	5.1 <sup>3</sup>	23 <sup>4</sup>	12 <sup>5</sup>	

FORT SULLY, S. DAK.

[From January, 1869, to December, 1891, inclusive.]

January .....	2.5	23.8	61.3	6.5	76.2	23.1	0.4	0.3	0.0	0.0	0.0	0.0	0.7	18	7	<sup>1</sup> 1871.
February .....	2.5	23.6	55.2	3.5	76.4	22.6	0.8	0.0	0.2	0.0	0.0	0.0	1.3	27	6	<sup>2</sup> 1889.
March .....	6.7	25.5	54.8	3.2	74.5	22.7	1.8	0.7	0.0	0.0	0.3	0.0	5.0	23	11	<sup>3</sup> November and December, 1881.
April .....	11.6	21.9	50.0	0.0	78.1	14.6	3.5	2.2	1.4	0.2	0.0	0.0	2.7	30	5	<sup>4</sup> March, 1890.
May .....	12.3	31.7	64.5	6.5	68.3	23.1	3.0	3.5	1.1	0.2	0.3	0.0	4.6	15	5	
June .....	19.6	34.9	70.0	6.7	65.1	22.9	6.8	3.0	1.6	0.3	0.3	0.0	3.8	20	8	
July .....	17.1	26.5	54.8	9.7	73.5	17.8	2.8	4.1	1.4	0.1	0.1	0.1	6.4	19	8	
August .....	12.3	22.4	51.6	6.5	77.6	14.7	3.8	2.9	0.8	0.1	0.1	0.1	4.3	24	6	
September ..	6.1	15.9	40.0	3.3	84.1	12.3	1.9	1.2	0.4	0.1	0.0	0.0	2.1	29	4	
October .....	3.7	14.4	32.3	3.2	85.6	11.9	1.7	0.7	0.1	0.0	0.0	0.0	1.1	27	4	
November .....	2.5	17.2	46.7	0.0	82.8	16.4	0.6	0.3	0.0	0.0	0.0	0.0	0.7	30	5	
December .....	3.1	18.9	45.1	0.0	81.1	17.5	0.6	0.8	0.0	0.0	0.0	0.0	1.0	31	5	
Year .....	100.0	28.1	35.6 <sup>1</sup>	11.8 <sup>2</sup>	76.9	18.3	2.4	1.6	0.6	0.1	0.1	0.01	6.4	50 <sup>3</sup>	11 <sup>4</sup>	

TABLE V.—*Details of precipitation*—Continued.

## FORT WINGATE, N. MEX.

[From January, 1870, to December, 1891, inclusive.]

Month.	Monthly distribution of precipitation.	Percentage of days on which rain fell.			Classification of rainfall: Percentage of days with (or without) rain.								Heaviest rain in one day.	Greatest consecutive No. of days—		Notes.
		Mean.	Max.	Min.	.00	T. to .25	.26 to .50	.51 to 1.00	1.01 to 2.00	2.01 to 3.00	3.01 to 5.00	Over 5.00		Without rain.	With rain.	
	<i>Per ct.</i>												<i>Inches.</i>			
January .....	7.5	14.1	38.7	0.0	85.9	9.5	2.9	1.2	0.4	0.0	0.0	0.0	2.0	31	5	<sup>1</sup> 1878.
February .....	10.9	17.2	28.6	0.0	82.8	12.6	2.2	1.3	0.6	0.2	0.3	0.0	4.5	28	6	<sup>2</sup> 1889.
March .....	6.8	13.3	25.8	0.0	86.7	10.3	1.3	1.3	0.4	0.0	0.0	0.0	1.2	31	5	<sup>3</sup> February 18 to June 21, 1889.
April .....	6.1	12.1	36.6	0.0	87.9	8.5	2.1	1.4	0.2	0.0	0.0	0.0	1.3	30	4	<sup>4</sup> July, 1874 and 1877; September, 1891; March and April, 1881.
May .....	3.4	8.5	22.6	0.0	91.5	7.0	1.0	0.3	0.0	0.2	0.0	0.0	2.1	31	3	
June .....	4.8	7.7	23.3	0.0	92.3	4.8	1.7	0.8	0.5	0.0	0.0	0.0	1.5	30	4	
July .....	17.0	26.2	35.5	12.9	73.8	18.3	4.3	2.5	1.0	0.2	0.0	0.0	2.5	21	7	
August .....	15.6	28.0	54.9	6.4	72.0	19.2	4.8	3.4	0.7	0.0	0.0	0.0	1.4	20	5	
September ..	9.5	15.2	40.0	3.3	84.8	9.7	3.0	1.8	0.5	0.0	0.2	0.0	3.5	27	7	
October .....	6.8	10.0	22.6	0.0	90.0	6.0	2.2	1.5	0.2	0.2	0.0	0.0	2.4	31	3	
November ..	4.8	9.7	23.3	0.0	90.3	6.9	2.1	0.3	0.3	0.0	0.0	0.0	1.3	30	4	
December ...	6.8	13.3	25.8	6.4	86.7	8.7	3.4	1.0	0.3	0.0	0.0	0.0	1.5	25	5	
Year .....	100.0	14.6	19.2 <sup>1</sup>	9.3 <sup>2</sup>	85.4	10.1	2.6	1.4	0.4	0.1	0.04	0.0	4.5	124 <sup>3</sup>	7 <sup>4</sup>	

## GALVESTON, TEX.

[From May, 1871, to December, 1891, inclusive.]

January .....	8.0	43.2	67.7	22.6	56.8	30.8	3.5	4.4	3.7	0.6	0.2	0.0	3.6	14	12	<sup>1</sup> 1882.
February .....	5.8	42.3	64.3	21.4	57.7	32.8	3.7	2.7	2.7	0.0	0.4	0.0	3.8	11	10	<sup>2</sup> 1876.
March .....	6.0	34.2	51.6	9.7	65.8	24.1	3.9	3.5	2.1	0.6	0.0	0.0	2.9	21	6	<sup>3</sup> October, 1871.
April .....	5.8	28.5	53.3	6.7	71.5	20.2	2.8	1.7	2.5	1.0	0.3	0.0	3.3	17	6	<sup>4</sup> October and November, 1874.
May .....	7.9	23.8	41.9	6.5	76.2	12.2	3.4	3.5	3.4	0.8	0.3	0.2	5.2	26	5	<sup>5</sup> July, 1882.
June .....	9.5	31.9	66.7	13.3	68.1	21.4	2.7	2.5	2.5	1.4	1.2	0.2	6.4	19	9	
July .....	5.8	33.2	58.1	12.9	66.8	22.4	5.4	3.1	2.0	0.3	0.0	0.0	2.9	18	13	
August .....	10.5	33.6	64.5	22.6	61.4	24.3	3.7	4.6	4.3	0.9	0.6	0.2	5.9	13	6	
September ..	13.8	39.2	66.7	10.0	60.8	22.4	4.4	6.2	2.5	1.9	1.3	0.5	6.5	13	9	
October .....	9.3	26.4	67.7	6.5	73.6	17.0	2.3	2.6	2.3	0.9	0.8	0.5	7.9	22	7	
November ...	9.1	33.3	60.0	6.7	66.7	18.6	4.6	5.4	3.3	1.0	0.2	0.2	5.6	13	10	
December ...	8.5	40.2	61.3	12.9	59.8	27.7	4.5	3.5	2.9	1.1	0.5	0.0	4.5	15	7	
Year .....	100.0	34.6	44.4 <sup>1</sup>	26.2 <sup>2</sup>	65.4	22.8	3.7	3.6	2.9	0.9	0.5	0.2	7.9 <sup>3</sup>	31 <sup>4</sup>	13 <sup>5</sup>	

## CAPE HATTERAS AND HATTERAS, N. C.

[From September, 1874, to December, 1891, inclusive.]

January .....	9.0	47.6	61.3	38.7	52.4	25.6	8.9	7.8	4.4	0.6	0.4	0.0	4.0	7	8	<sup>1</sup> 1885.
February .....	6.5	40.8	78.6	21.4	59.2	24.8	5.2	6.5	3.5	0.6	0.2	0.0	3.2	10	10	<sup>2</sup> 1887.
March .....	9.4	41.0	61.3	19.4	59.0	21.1	6.5	7.6	4.7	0.2	0.8	0.2	6.7	10	9	<sup>3</sup> 1880.
April .....	7.1	38.4	56.7	16.7	61.6	23.9	5.7	4.5	2.4	1.0	1.0	0.0	4.8	11	7	<sup>4</sup> September 26 to October 21, 1884.
May .....	6.5	34.9	67.7	19.4	65.1	21.6	4.0	5.7	2.1	0.9	0.6	0.0	4.0	15	12	<sup>5</sup> January 27 to February 8, 1876.
June .....	7.1	40.0	53.3	26.7	60.0	24.1	6.7	4.1	3.7	1.2	0.2	0.0	3.9	11	7	
July .....	9.4	41.6	80.0	22.6	58.4	22.8	5.7	7.0	4.2	1.1	0.8	0.0	4.2	14	9	
August .....	9.6	47.8	61.3	38.7	52.2	26.2	7.8	9.3	3.0	1.1	0.2	0.2	9.2	10	11	
September ..	9.8	33.3	63.3	13.3	66.7	17.0	4.1	4.8	4.3	1.7	0.7	0.7	5.9	21	10	
October .....	9.6	32.3	45.2	19.4	67.6	17.0	4.5	4.8	2.5	2.0	1.1	0.4	5.3	21	7	
November ...	7.4	36.7	63.3	3.3	63.3	21.3	5.2	4.1	4.3	0.9	0.9	0.0	4.2	17	8	
December ...	8.6	38.0	58.1	12.9	62.0	20.8	5.2	6.3	3.6	1.4	0.7	0.0	4.2	13	8	
Year .....	100.0	39.4	45.2 <sup>1</sup>	34.8 <sup>2</sup>	60.6	22.2	5.8	6.0	3.6	1.1	0.6	0.1	9.2 <sup>3</sup>	26 <sup>4</sup>	13 <sup>5</sup>	

## HELENA, MONT.

[From April, 1880, to December, 1891, inclusive.]

January .....	9.9	41.6	64.5	22.6	58.4	37.5	2.6	0.6	0.9	0.0	0.0	0.0	1.1	15	9	<sup>1</sup> 1891.
February .....	5.4	36.8	41.4	17.9	63.2	34.8	1.9	0.0	0.0	0.0	0.0	0.0	0.3	11	9	<sup>2</sup> 1881.
March .....	5.4	32.6	58.1	0.0	67.4	30.5	1.2	0.9	0.0	0.0	0.0	0.0	0.6	31	8	<sup>3</sup> 1891.
April .....	8.4	31.9	40.0	20.0	68.1	27.2	2.5	2.2	0.0	0.0	0.0	0.0	0.9	15	6	<sup>4</sup> February 26 to April 5, 1881.
May .....	11.5	39.8	71.0	19.4	60.2	33.3	4.0	2.4	0.0	0.0	0.0	0.0	0.8	13	8	<sup>5</sup> May 27 to June 15, 1891.
June .....	18.3	50.0	80.0	13.3	50.0	39.2	6.9	3.6	0.3	0.0	0.0	0.0	1.1	19	15	
July .....	8.4	28.2	54.8	9.7	71.8	23.4	3.2	1.6	0.0	0.0	0.0	0.0	0.9	17	10	
August .....	5.3	21.4	41.9	6.5	78.6	18.2	2.6	0.3	0.3	0.0	0.0	0.0	1.1	21	6	
September ...	8.4	20.6	33.3	0.0	79.4	16.4	1.8	1.5	0.6	0.3	0.0	0.0	2.1	30	5	
October .....	7.6	27.0	38.7	9.7	73.0	24.0	2.1	0.3	0.3	0.3	0.0	0.0	2.2	27	6	
November ...	3.8	28.3	40.0	13.3	71.7	27.2	0.8	0.0	0.3	0.0	0.0	0.0	1.1	14	4	
December ...	7.6	36.3	58.1	19.4	63.7	33.1	2.4	0.8	0.0	0.0	0.0	0.0	1.0	18	10	
Year .....	100.0	32.9	46.8 <sup>1</sup>	24.9 <sup>2</sup>	67.1	28.7	2.7	1.2	0.2	0.05	0.0	0.0	2.2 <sup>3</sup>	39 <sup>4</sup>	20 <sup>5</sup>	

## HURON, S. DAK.

[From July, 1881, to December, 1891, inclusive.]

January .....	1.8	38.7	58.0	16.0	61.3	38.1	0.3	0.3	0.0	0.0	0.0	0.0	0.52	12	12	<sup>1</sup> 1891.
February .....	2.7	44.7	72.4	18.0	55.3	43.6	0.7	0.4	0.0	0.0	0.0	0.0	0.7	16	10	<sup>2</sup> 1885.
March .....	3.2	43.5	66.4	25.8	56.5	40.6	2.3	0.6	0.0	0.0	0.0	0.0	0.8	14	6	<sup>3</sup> January and February, 1882; October and November, 1887.
April .....	11.7	39.3	50.0	20.0	60.7	29.0	5.7	2.3	2.3	0.0	0.0	0.0	1.8	16	6	<sup>4</sup> January, 1886.
May .....	14.0	46.1	51.6	27.0	53.9	35.1	3.9	5.2	1.9	0.0	0.0	0.0	1.7	11	10	
June .....	18.6	44.7	70.0	30.0	55.3	29.0	6.3	5.0	3.7	0.7	0.0	0.0	2.1	11	8	
July .....	16.3	45.2	67.7	29.0	54.8	32.5	4.0	5.0	3.2	0.2	0.0	0.0	2.1	10	8	
August .....	13.5	44.9	58.1	22.6	55.1	34.0	5.0	3.5	2.4	0.0	0.0	0.0	1.5	12	11	
September ...	6.8	31.5	43.3	16.6	68.5	26.1	2.1	2.4	0.9	0.0	0.0	0.0	1.5	12	5	
October .....	5.9	32.5	54.8	19.3	67.5	28.2	1.8	1.8	0.7	0.0	0.0	0.0	1.8	18	6	
November ...	2.3	29.4	46.6	10.7	70.6	28.5	0.3	0.3	0.3	0.0	0.0	0.0	1.4	18	5	
December ...	3.2	32.8	48.4	12.6	67.2	30.2	2.3	0.3	0.0	0.0	0.0	0.0	0.6	16	5	
Year .....	100.0	39.4	49.3 <sup>1</sup>	33.1 <sup>2</sup>	60.6	32.9	2.9	2.2	1.3	0.1	0.0	0.0	2.1	20 <sup>3</sup>	12 <sup>4</sup>	

## RAINFALL AND SNOW OF THE UNITED STATES.

TABLE V.—*Details of precipitation*—Continued.

## INDIANAPOLIS, IND.

[From March, 1871, to December, 1891, inclusive.]

Month.	Monthly distribution of precipitation.	Percentage of days on which rain fell.			Classification of rainfall: Percentage of days with (or without) rain.								Heaviest rain in one day.	Greatest consecutive No. of days—		Notes.
		Mean.	Max.	Min.	.00	T. to .25	.26 to .50	.51 to 1.00	1.01 to 2.00	2.01 to 3.00	3.01 to 5.00	Over 5.00		Without rain.	With rain.	
January .....	7.1	49.8	71.0	29.0	50.2	38.4	5.0	4.8	1.5	0.0	0.1	0.0	Inches.	15	13	1890.
February .....	7.9	49.6	75.0	14.3	50.4	35.6	5.7	6.0	1.4	0.7	0.2	0.0	3.8	20	10	1879.
March .....	8.8	50.1	71.0	29.0	49.9	35.2	6.5	6.0	2.0	0.4	0.0	0.0	2.3	12	11	September, 1891.
April .....	7.9	45.7	66.7	30.0	54.3	31.4	6.5	5.7	1.8	0.3	0.0	0.0	2.2	11	8	June, 1890.
May .....	9.2	44.7	64.5	22.6	55.3	28.9	7.4	5.5	2.1	0.8	0.0	0.0	2.7	15	8	
June .....	11.3	48.4	73.3	30.0	51.6	29.4	7.9	7.2	3.3	0.6	0.0	0.0	2.9	10	14	
July .....	10.4	38.2	64.5	16.1	61.8	22.7	5.7	5.5	3.2	0.8	0.3	0.0	3.7	13	7	
August .....	8.3	37.3	58.1	16.1	62.7	25.0	4.8	3.9	3.0	0.6	0.0	0.0	2.9	14	11	
September .....	6.2	32.9	63.3	10.0	67.1	22.2	4.0	4.0	2.2	0.5	0.0	0.0	2.6	23	10	
October .....	6.9	36.7	71.0	16.1	63.3	23.5	6.5	4.6	2.1	0.0	0.0	0.0	1.9	14	9	
November .....	8.6	46.5	63.3	30.0	53.5	32.1	6.5	5.1	2.4	0.1	0.3	0.0	4.3	13	9	
December .....	7.4	50.7	74.2	32.3	49.3	38.7	5.5	4.3	1.8	0.2	0.2	0.0	3.5	11	11	
Year .....	100.0	44.2	55.1 <sup>1</sup>	35.3 <sup>2</sup>	55.8	30.3	6.0	5.2	2.2	0.4	0.1	0.0	4.3	23 <sup>3</sup>	14 <sup>4</sup>	

## JACKSONVILLE, FLA.

[From October, 1871, to December, 1891, inclusive.]

January .....	5.6	40.2	83.9	12.9	59.8	27.9	4.5	4.5	2.9	0.2	0.2	0.0	3.1	18	13	1885.
February .....	5.3	45.3	79.3	14.3	54.7	34.0	4.8	3.9	1.9	0.5	0.2	0.0	3.2	12	11	December, 1871, and January, 1872.
March .....	6.5	37.1	80.6	12.9	62.9	24.8	4.5	5.4	1.9	0.5	0.0	0.0	2.3	15	10	September and October, 1884.
April .....	5.3	33.0	60.6	13.3	67.0	22.0	5.0	2.9	2.5	0.3	0.3	0.0	3.2	12	7	
May .....	7.6	39.0	77.4	16.1	61.0	24.3	5.2	5.3	3.1	1.1	0.0	0.0	2.7	16	7	
June .....	11.1	50.5	70.0	20.0	49.5	31.0	7.6	7.0	3.5	1.0	0.2	0.2	5.1	14	13	
July .....	11.2	53.9	87.1	6.5	46.1	31.5	8.7	7.6	4.8	1.0	0.3	0.0	3.5	13	12	
August .....	12.1	53.4	80.6	19.4	46.6	33.7	6.6	6.3	5.2	0.8	0.8	0.0	4.4	9	10	
September .....	14.7	57.0	96.7	23.3	43.0	34.2	5.8	8.0	5.8	2.0	1.0	0.2	6.2	8	19	
October .....	10.3	43.5	80.6	9.7	56.6	29.5	4.3	3.8	2.9	1.8	0.9	0.2	5.1	16	14	
November .....	4.9	43.7	93.3	16.7	56.3	34.6	3.7	3.0	2.2	0.0	0.2	0.0	3.6	20	17	
December .....	5.4	39.6	87.1	6.5	60.3	30.0	3.1	3.8	1.8	0.8	0.2	0.0	3.3	23	15	
Year .....	100.0	44.7	71.9	26.0	55.3	29.8	5.3	5.1	3.2	0.8	0.4	0.05	6.2 <sup>1</sup>	34 <sup>2</sup>	32 <sup>3</sup>	

## JUPITER, FLA.

[From January, 1888, to December, 1892, inclusive.]

January .....	7.2	32.3	45.0	22.6	67.7	21.9	3.9	3.9	1.3	0.6	0.6	0.0	4.3	13	5	1891.
February .....	5.3	38.0	46.4	31.0	62.0	24.6	5.6	5.6	2.1	0.0	0.0	0.0	1.8	9	7	1889.
March .....	3.0	25.2	32.3	16.1	74.8	17.4	3.9	2.6	0.6	0.6	0.0	0.0	2.8	12	4	January, 1889.
April .....	4.6	28.0	40.0	20.0	72.0	18.7	5.3	2.7	0.7	0.7	0.0	0.0	2.3	14	9	April to May, 1889.
May .....	14.1	35.1	51.6	16.1	63.9	16.1	9.0	3.2	5.2	1.9	0.6	0.0	4.2	26	7	June, 1892.
June .....	9.7	49.3	90.0	16.7	50.7	27.3	5.3	9.3	6.0	1.3	0.0	0.0	3.0	15	19	
July .....	10.8	40.0	54.8	19.4	60.0	21.9	9.0	6.4	1.3	1.3	0.0	0.0	2.2	16	10	
August .....	11.1	47.1	58.1	35.5	52.9	25.8	10.3	7.1	2.6	1.3	0.0	0.0	2.2	9	9	
September .....	15.5	67.3	90.0	46.7	32.7	36.0	8.0	13.3	8.0	1.3	0.7	0.0	3.8	8	17	
October .....	9.2	32.9	54.8	12.9	67.1	16.8	3.2	5.8	3.9	1.9	1.3	0.0	4.2	19	8	
November .....	6.0	33.3	40.0	26.7	66.7	22.7	6.0	1.3	2.7	0.7	0.0	0.0	2.7	10	4	
December .....	3.5	35.5	54.8	12.9	64.5	28.4	5.2	0.6	0.6	0.6	0.0	0.0	2.9	11	6	
Year .....	100.0	38.8	44.7 <sup>1</sup>	31.7 <sup>2</sup>	61.2	23.1	6.2	5.2	2.9	1.0	0.3	0.0	4.3 <sup>3</sup>	31 <sup>4</sup>	19 <sup>5</sup>	

## KEOKUK, IOWA.

[From August 1871, to December 1891, inclusive.]

January .....	4.8	35.3	61.0	13.0	64.7	29.5	2.7	2.4	0.7	0.0	0.0	0.0	2.0	14	7	1878.
February .....	4.8	36.8	64.3	7.1	63.2	30.3	2.7	2.8	0.8	0.0	0.2	0.0	3.6	15	8	1873.
March .....	6.0	41.3	67.7	19.0	58.7	33.2	4.2	2.9	1.0	0.0	0.0	0.0	2.0	13	7	October and November, 1879.
April .....	8.3	39.7	60.0	16.6	60.3	27.0	7.5	3.7	1.2	0.3	0.0	0.0	2.4	14	6	July and August, 1882.
May .....	11.4	40.5	58.1	19.3	59.5	24.7	6.4	6.3	2.4	0.7	0.0	0.0	2.6	15	6	
June .....	14.0	43.0	63.3	16.6	57.0	25.7	7.3	6.3	2.3	1.4	0.0	0.0	3.0	16	7	
July .....	12.0	32.6	48.4	9.7	67.4	18.5	5.5	4.7	2.3	1.1	0.5	0.0	4.3	15	7	
August .....	8.8	29.8	45.0	6.5	70.2	20.0	3.8	3.4	1.5	0.9	0.2	0.0	3.7	19	8	
September .....	10.0	31.3	63.3	3.3	68.7	19.4	4.9	4.1	1.9	0.5	0.5	0.0	4.8	16	6	
October .....	8.8	30.1	54.8	12.9	69.9	18.5	4.5	4.6	2.3	0.2	0.0	0.0	2.2	15	7	
November .....	5.7	29.8	46.6	13.3	70.2	20.8	4.9	3.0	1.1	0.0	0.0	0.0	1.8	22	6	
December .....	5.4	34.4	54.7	6.4	65.6	27.3	4.3	1.2	1.2	0.4	0.0	0.0	2.5	16	8	
Year .....	100.0	35.4	43.3 <sup>1</sup>	25.2 <sup>2</sup>	64.6	24.5	4.9	3.8	1.6	0.5	0.1	0.0	4.8	26 <sup>3</sup>	11 <sup>4</sup>	

## KEY WEST, FLA.

[From November, 1870, to December, 1891, inclusive.]

January .....	5.2	37.0	67.7	9.8	63.1	30.4	2.6	2.6	0.9	0.4	0.0	0.0	2.7	22	11	1887.
February .....	4.4	35.1	71.4	10.7	64.9	29.7	2.4	2.0	0.5	0.5	0.0	0.0	2.9	16	10	1871.
March .....	3.0	21.8	48.4	3.2	78.1	17.5	2.0	1.4	0.8	0.2	0.0	0.0	2.3	25	8	March and April, 1871.
April .....	3.2	21.6	63.3	3.3	78.5	17.7	1.1	1.7	0.6	0.2	0.2	0.0	3.2	26	7	September and October, 1884.
May .....	8.2	32.5	61.3	12.9	67.4	22.2	4.5	2.9	2.0	0.5	0.5	0.0	4.8	14	8	
June .....	10.3	42.1	66.7	10.0	57.9	28.1	5.5	4.8	2.4	1.1	0.2	0.0	3.6	24	14	
July .....	10.5	48.4	64.5	29.0	51.6	34.1	6.1	5.2	2.0	0.8	0.2	0.0	4.0	10	8	
August .....	12.7	52.7	77.4	29.0	47.3	35.3	6.5	7.1	2.6	0.9	0.3	0.0	3.8	11	13	
September .....	15.8	60.3	80.0	36.7	39.7	34.8	9.0	9.0	5.9	1.4	0.0	0.2	5.8	9	16	
October .....	13.2	43.9	74.2	19.4	56.0	28.3	6.6	4.1	3.3	1.1	0.4	0.2	8.2	14	12	
November .....	6.3	37.3	66.7	10.0	62.8	28.9	3.0	3.8	0.9	0.3	0.3	0.0	4.5	14	11	
December .....	4.2	33.1	64.5	9.7	67.0	27.7	2.9	1.5	0.4	0.4	0.1	0.0	3.9	19	9	
Year .....	100.0	38.8	56.5 <sup>1</sup>	18.1 <sup>2</sup>	61.2	27.9	4.3	3.9	1.9	0.6	0.2	0.03	8.2	39 <sup>3</sup>	22 <sup>4</sup>	



## RAINFALL AND SNOW OF THE UNITED STATES.

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TABLE V.—Details of precipitation—Continued.

KNOXVILLE, TENN.

[From January, 1871, to December, 1891, inclusive.]

Month.	Monthly dis-tribution of precipitation.	Percentage of days on which rain fell.			Classification of rainfall: Percentage of days with (or without) rain.								Heaviest rain in one day.	Greatest consecutive No. of days—		Notes.
		Mean.	Max.	Min.	.00	T. to .25	.26 to .50	.51 to 1.00	1.01 to 2.00	2.01 to 3.00	3.01 to 5.00	Over 5.00		With- out rain.	With rain.	
	Per ct.												Inches.			
January .....	10.7	50.7	80.6	20.6	49.3	30.0	7.1	8.9	4.1	0.6	0.0	0.0	3.0	14	18	<sup>1</sup> 1882 and 1891.
February .....	10.0	49.1	71.4	28.6	50.9	28.8	8.1	6.9	3.9	1.2	0.2	0.0	4.4	9	7	<sup>2</sup> 1879.
March .....	10.9	48.3	80.6	32.3	51.7	27.7	8.4	7.2	3.4	1.2	0.2	0.2	5.6	15	11	<sup>3</sup> September and October, 1881.
April .....	9.6	46.0	76.7	26.7	54.0	27.9	6.8	7.3	2.9	0.8	0.3	0.0	3.3	11	9	<sup>4</sup> January, 1882.
May .....	7.3	44.7	64.5	29.0	55.3	29.8	6.6	6.1	1.7	0.5	0.0	0.0	2.2	11	7	
June .....	8.3	48.3	70.0	20.0	51.7	31.0	7.5	7.6	2.2	0.0	0.0	0.0	1.9	13	10	
July .....	8.3	44.4	67.7	22.6	55.5	27.5	8.3	4.5	3.8	0.2	0.2	0.0	3.1	11	9	
August .....	8.1	44.9	64.5	29.0	55.2	29.5	5.8	5.8	2.8	0.9	0.0	0.0	2.6	11	8	
September .....	5.8	31.4	53.3	10.0	68.4	20.5	4.8	4.0	1.4	0.7	0.2	0.0	3.2	16	9	
October .....	5.8	30.4	54.8	12.9	69.6	18.6	5.5	3.1	3.2	0.0	0.0	0.0	1.8	21	7	
November .....	7.5	37.6	56.7	10.0	62.4	22.4	6.3	4.9	3.7	0.3	0.0	0.0	2.6	16	7	
December .....	7.7	44.0	64.5	29.0	56.0	27.8	7.5	5.2	3.2	0.3	0.0	0.0	2.1	16	10	
Year .....	100.0	43.4	49.6 <sup>1</sup>	34.2 <sup>2</sup>	56.6	26.8	6.9	6.0	3.0	0.6	0.1	0.02	5.6	25 <sup>3</sup>	18 <sup>4</sup>	

LA CROSSE, WIS.

[From November, 1872, to December, 1891, inclusive.]

January .....	4.1	45.2	83.9	22.6	54.8	40.6	2.8	1.8	0.0	0.0	0.0	0.0	1.0	11	9	<sup>1</sup> 1888.
February .....	3.5	40.1	82.8	14.3	59.9	35.3	3.9	0.9	0.0	0.0	0.0	0.0	0.8	12	12	<sup>2</sup> 1873.
March .....	5.4	38.9	58.1	16.1	61.1	33.6	2.6	2.0	0.5	0.2	0.0	0.0	2.0	14	8	<sup>3</sup> March, 1874.
April .....	6.3	41.4	66.7	20.0	58.6	31.6	6.3	3.0	0.5	0.0	0.0	0.0	1.1	13	9	<sup>4</sup> December, 1887, and January, 1888.
May .....	9.8	42.6	74.2	19.4	57.4	30.0	5.9	5.1	1.4	0.2	0.0	0.0	2.1	12	8	
June .....	14.1	47.4	70.0	33.3	52.6	29.7	8.8	4.9	3.3	0.7	0.0	0.0	2.3	12	14	
July .....	13.9	43.3	71.0	19.4	56.7	29.2	6.3	4.8	1.7	0.8	0.5	0.0	3.9	14	10	
August .....	11.4	38.0	67.7	22.6	62.0	26.1	4.1	4.7	2.2	0.9	0.0	0.0	2.8	14	8	
September .....	14.1	45.1	90.0	16.7	54.9	28.0	6.3	6.7	3.7	0.2	0.0	0.2	5.6	12	10	
October .....	7.6	36.8	61.3	19.4	63.2	27.5	3.9	3.9	1.5	0.0	0.0	0.0	1.3	13	8	
November .....	5.4	38.5	70.0	13.3	61.5	32.2	3.5	2.0	0.8	0.0	0.0	0.0	1.7	14	9	
December .....	4.4	43.1	90.3	16.1	56.9	38.1	3.4	1.0	0.6	0.0	0.0	0.0	1.4	16	18	
Year .....	100.0	41.7	66.7 <sup>1</sup>	27.4 <sup>2</sup>	58.3	31.8	4.8	3.4	1.4	0.2	0.04	0.02	5.6	25 <sup>3</sup>	19 <sup>4</sup>	

LEAVENWORTH, KANS.

[From June, 1871, to December, 1891, inclusive.]

January .....	3.6	30.8	61.3	3.2	69.2	25.8	2.6	1.6	0.8	0.0	0.0	0.0	1.7	16	6	<sup>1</sup> 1884.
February .....	3.9	33.3	67.9	10.7	66.7	27.4	3.2	1.8	0.9	0.0	0.0	0.0	1.7	16	8	<sup>2</sup> 1873.
March .....	5.7	32.9	54.9	16.1	67.1	23.4	5.3	2.9	1.0	0.3	0.0	0.0	2.2	14	7	<sup>3</sup> November and December, 1890.
April .....	8.9	40.3	66.7	20.0	59.7	25.5	7.8	4.2	2.5	0.3	0.0	0.0	2.5	12	8	<sup>4</sup> December, 1884.
May .....	14.1	43.7	61.3	29.0	56.3	25.8	6.6	6.1	3.9	1.3	0.0	0.0	2.5	12	8	
June .....	13.5	40.6	60.0	26.7	59.4	21.6	6.7	6.7	4.7	0.8	0.2	0.0	3.4	14	7	
July .....	11.0	29.6	45.2	6.5	70.4	15.2	5.4	5.3	2.8	0.3	0.6	0.0	3.6	28	5	
August .....	11.5	30.2	51.6	9.7	69.8	18.0	4.7	3.2	3.2	0.7	0.3	0.0	3.6	25	7	
September .....	9.1	27.4	56.7	10.0	72.6	15.5	5.0	3.5	2.9	0.6	0.0	0.0	2.7	17	10	
October .....	9.1	26.5	58.1	13.0	73.5	15.4	5.1	3.1	2.6	0.2	0.2	0.0	3.1	15	5	
November .....	5.7	21.5	40.0	3.3	78.5	14.2	2.7	2.7	1.4	0.5	0.0	0.0	2.6	20	6	
December .....	3.9	26.4	61.3	9.7	73.6	21.1	2.8	1.3	1.2	0.0	0.0	0.0	1.7	23	11	
Year .....	100.0	31.9	45.5 <sup>1</sup>	22.5 <sup>2</sup>	68.1	20.7	4.8	3.5	2.3	0.4	0.2	0.0	3.6	36 <sup>3</sup>	11 <sup>4</sup>	

LITTLE ROCK, ARK.

[From July, 1879, to December, 1891, inclusive.]

January .....	9.8	44.4	58.1	25.8	55.6	26.6	5.9	5.9	5.1	0.8	0.0	0.0	2.8	12	6	<sup>1</sup> 1886.
February .....	11.1	39.3	60.7	24.1	60.7	20.6	5.3	8.4	3.6	1.1	0.3	0.0	3.3	10	9	<sup>2</sup> 1881.
March .....	9.2	41.3	54.8	32.3	58.7	23.7	5.6	7.3	4.3	0.5	0.0	0.0	2.2	13	6	<sup>3</sup> October and November, 1887.
April .....	9.0	39.2	46.7	26.7	60.8	21.9	6.4	5.8	4.2	0.6	0.3	0.0	3.4	11	7	<sup>4</sup> November, 1886.
May .....	9.8	40.3	61.3	16.1	59.7	21.5	8.6	5.9	3.8	0.0	0.3	0.3	6.3	19	10	
June .....	8.0	42.8	50.0	26.7	57.2	25.3	7.2	7.2	2.2	0.6	0.3	0.0	3.4	13	11	
July .....	7.1	37.7	54.8	22.6	62.3	24.6	4.0	5.7	3.0	0.0	0.5	0.0	3.7	13	7	
August .....	7.3	33.7	48.4	12.9	66.3	21.3	5.2	4.2	1.5	0.5	1.0	0.0	4.1	15	7	
September .....	5.9	29.7	56.7	3.3	70.3	18.7	3.3	4.4	2.8	0.5	0.0	0.0	2.8	18	9	
October .....	4.5	28.0	48.4	16.1	72.0	19.9	2.5	3.5	1.7	0.5	0.0	0.0	2.1	14	5	
November .....	10.3	37.5	70.0	20.0	62.5	19.0	5.1	6.7	4.9	1.3	0.3	0.0	3.1	22	13	
December .....	8.0	39.9	71.0	22.5	60.1	27.8	4.5	3.0	3.7	0.3	0.7	0.0	4.6	13	10	
Year .....	100.0	37.8	42.9 <sup>1</sup>	31.0 <sup>2</sup>	62.2	22.6	5.3	5.7	3.4	0.6	0.3	0.02	6.3	26 <sup>3</sup>	13 <sup>4</sup>	

LOS ANGELES, CAL.

[From July, 1877, to December, 1891, inclusive.]

January .....	21.6	20.0	41.9	3.2	80.0	11.8	2.1	2.5	2.8	0.7	0.2	0.0	4.7	26	7	<sup>1</sup> 1890.
February .....	22.2	27.6	53.6	3.6	72.4	15.2	4.3	3.8	3.0	1.3	0.0	0.0	2.8	25	7	<sup>2</sup> July 1 to October 28, 1877.
March .....	12.2	27.4	67.7	9.7	72.6	18.7	3.0	3.5	1.6	0.7	0.0	0.0	2.7	18	9	<sup>3</sup> March, 1884.
April .....	7.2	22.4	36.7	6.7	77.6	15.7	2.6	2.9	1.2	0.0	0.0	0.0	2.0	17	5	
May .....	1.7	13.4	35.6	0.0	86.6	12.4	0.7	0.0	0.2	0.0	0.0	0.0	1.5	31	5	
June .....	0.6	6.7	26.7	0.0	93.3	6.2	0.0	0.5	0.0	0.0	0.0	0.0	0.6	30	3	
July .....	0.3	3.4	12.9	0.0	96.6	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.2	31	2	
August .....	0.6	3.0	16.1	0.0	97.0	2.8	0.0	0.2	0.0	0.0	0.0	0.0	0.2	31	2	
September .....	0.3	3.1	16.7	0.0	96.9	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	30	3	
October .....	3.9	9.0	22.6	0.0	91.0	6.7	0.6	1.1	0.4	0.0	0.2	0.0	3.2	31	4	
November .....	8.9	11.6	36.7	0.0	88.4	6.6	1.9	1.9	0.9	0.2	0.2	0.0	3.4	30	8	
December .....	20.5	24.9	67.7	6.5	75.1	13.8	2.8	4.5	2.4	0.6	0.9	0.0	4.3	27	7	
Year .....	100.0	14.4	23.8	7.4	85.6	9.7	1.5	1.7	1.0	0.3	0.1	0.0	4.7 <sup>1</sup>	120 <sup>2</sup>	9 <sup>3</sup>	

## RAINFALL AND SNOW OF THE UNITED STATES.

TABLE V. — *Details of precipitation.*

LOUISVILLE, KY.

[From March, 1872, to December, 1891, inclusive.]

Month.	Monthly distribution of precipitation.	Percentage of days on which rain fell.			Classification of rainfall: Percentage of days with (or without) rain.								Heaviest rain in one day.	Greatest consecutive No. of days—		Notes.
		Mean.	Max.	Min.	.00	T. to .25	.26 to .50	.51 to 1.00	1.01 to 2.00	2.01 to 3.00	3.01 to 5.00	Over 5.00		Without rain.	With rain.	
	<i>Per ct.</i>												<i>Inches.</i>			
January .....	8.8	51.1	80.6	32.3	48.9	36.2	5.9	5.4	2.7	0.7	0.2	0.0	3.4	11	10	1 <sup>1886</sup> . 2 <sup>1875</sup> . 3 <sup>1876</sup> . 4 <sup>September, 1891</sup> . 5 <sup>June, 1889</sup> .
February .....	9.5	47.9	67.9	17.9	52.1	29.7	8.5	5.6	3.9	0.7	0.0	0.0	3.0	7	11	
March .....	9.2	49.2	71.0	29.0	50.8	31.1	8.4	6.8	2.9	0.0	0.0	0.0	2.0	12	7	
April .....	9.0	44.5	63.3	20.0	55.5	29.2	6.8	5.0	2.7	0.5	0.3	0.0	3.6	11	8	
May .....	7.9	42.3	58.1	19.4	57.7	28.7	6.5	4.2	2.1	0.6	0.2	0.0	3.5	15	8	
June .....	8.2	46.0	70.0	26.7	54.0	27.0	9.8	6.0	2.7	0.5	0.0	0.0	2.8	12	13	
July .....	8.2	37.6	61.3	16.1	62.4	23.7	6.1	4.4	2.9	0.3	0.2	0.0	3.4	12	6	
August .....	8.2	34.0	61.3	19.4	66.0	20.4	5.3	5.6	1.8	0.0	0.3	0.0	3.8	14	9	
September .....	6.2	31.7	56.7	13.3	68.3	20.4	5.3	3.8	2.2	0.3	0.0	0.0	2.3	17	7	
October .....	6.4	31.6	51.6	10.1	68.4	19.4	6.3	3.7	1.5	0.3	0.2	0.0	4.1	13	4	
November .....	9.0	41.2	63.3	16.7	58.8	26.0	5.0	6.5	3.0	0.7	0.0	0.0	2.6	15	10	
December .....	8.4	47.1	74.1	25.8	52.9	34.7	4.5	4.7	2.6	0.5	0.2	0.0	3.9	11	9	
Year .....	100.0	42.0	49.0 <sup>1</sup>	32.3 <sup>2</sup>	58.0	27.2	6.5	5.1	2.6	0.5	0.1	0.0	4.1 <sup>3</sup>	17 <sup>4</sup>	13 <sup>5</sup>	

LYNCHBURG, VA.

[From June, 1871, to December, 1891, inclusive.]

January .....	9.7	41.9	74.2	29.0	58.1	25.1	9.2	5.5	1.8	0.3	0.0	0.0	2.2	10	10	1 <sup>1889</sup> . 2 <sup>1878</sup> . 3 <sup>1877</sup> . 4 <sup>August and September, 1881</sup> . 5 <sup>August, 1891</sup> .
February .....	8.1	40.9	64.3	10.7	59.1	24.6	6.7	7.3	2.1	0.2	0.0	0.0	2.2	17	10	
March .....	9.0	41.6	64.5	19.4	58.4	26.6	6.8	4.7	3.2	0.3	0.0	0.0	2.1	11	7	
April .....	7.4	42.3	56.7	23.3	57.7	28.4	7.0	4.7	2.0	0.2	0.0	0.0	2.2	10	6	
May .....	8.6	43.1	71.0	19.4	56.9	26.5	9.0	5.5	1.6	0.5	0.0	0.0	2.2	12	13	
June .....	8.1	46.0	73.3	13.3	54.0	31.5	6.5	5.9	1.6	0.5	0.0	0.0	2.8	11	10	
July .....	8.6	44.2	71.0	19.4	55.8	31.3	5.0	4.6	2.9	0.2	0.2	0.0	3.2	10	9	
August .....	9.3	46.1	80.6	16.1	53.9	31.2	5.9	5.5	3.2	0.3	0.0	0.0	2.8	17	17	
September .....	8.6	34.0	60.0	6.7	66.0	21.3	4.3	4.5	3.0	0.6	0.3	0.0	3.4	17	11	
October .....	7.2	31.0	64.5	12.9	69.0	19.9	4.1	4.5	1.7	0.6	0.2	0.0	4.7	15	8	
November .....	7.0	36.0	76.7	23.3	64.0	24.2	5.0	4.3	2.1	0.2	0.2	0.0	4.2	13	13	
December .....	8.4	36.3	54.8	19.4	63.7	25.0	4.3	4.5	2.2	0.3	0.0	0.0	3.0	17	8	
Year .....	100.0	40.3	55.9 <sup>1</sup>	31.8 <sup>2</sup>	59.7	26.2	6.2	5.1	2.3	0.4	0.1	0.0	4.7 <sup>3</sup>	18 <sup>4</sup>	17 <sup>5</sup>	

MARIETTA, OHIO.

[From June, 1874, to December, 1891, inclusive.]

January .....	7.3	34.2	58.1	9.7	65.8	17.1	9.3	6.3	1.3	0.2	0.0	0.0	2.2	21	7	1 <sup>1890</sup> . 2 <sup>1884</sup> . 3 <sup>April and May, 1884</sup> . 4 <sup>February, 1887</sup> .
February .....	7.4	34.0	75.0	0.0	66.0	17.7	9.4	4.4	2.5	0.0	0.0	0.0	1.5	28	11	
March .....	7.8	35.7	54.8	6.5	64.3	18.6	10.2	5.3	1.5	0.0	0.0	0.0	1.8	17	6	
April .....	8.0	30.2	53.3	3.3	69.8	18.0	6.3	3.9	1.8	0.2	0.0	0.0	2.2	28	7	
May .....	9.4	33.4	51.8	6.5	66.6	19.9	7.2	4.2	1.5	0.6	0.0	0.0	2.2	19	6	
June .....	9.9	33.3	56.7	6.7	66.7	18.1	7.0	6.5	1.7	0.0	0.0	0.0	1.6	24	6	
July .....	10.6	31.0	51.6	9.7	69.0	16.8	5.6	4.1	3.6	0.7	0.0	0.2	5.4	26	8	
August .....	9.4	26.3	45.2	3.2	73.7	13.1	6.3	4.1	2.0	0.5	0.2	0.2	5.2	22	8	
September .....	7.3	23.5	43.3	3.3	76.5	12.6	4.8	3.9	1.5	0.4	0.4	0.0	4.6	26	5	
October .....	7.3	26.5	51.6	6.5	73.5	15.1	6.6	3.8	0.5	0.5	0.0	0.0	2.2	26	5	
November .....	7.3	36.1	63.3	20.0	63.9	21.1	8.0	6.1	0.9	0.0	0.0	0.0	1.2	14	8	
December .....	8.3	31.4	45.2	16.1	68.6	17.4	6.3	5.9	1.3	0.5	0.0	0.0	2.4	17	8	
Year .....	100.0	31.3	47.7 <sup>1</sup>	10.7 <sup>2</sup>	68.7	17.1	7.2	4.9	1.7	0.3	0.05	0.03	5.4	41 <sup>3</sup>	11 <sup>4</sup>	

MARQUETTE, MICH.

[From June, 1871, to December, 1892, inclusive.]

January .....	6.4	55.5	83.9	12.9	44.5	50.0	3.4	1.6	0.5	0.0	0.0	0.0	1.2	19	11	1 <sup>1884</sup> . 2 <sup>1877</sup> . 3 <sup>April, 1877</sup> . 4 <sup>December, 1885, and January, 1886; February, 1886; September and October, 1887</sup> .
February .....	6.8	51.5	78.6	10.7	48.5	44.8	3.7	2.3	0.7	0.0	0.0	0.0	1.4	19	14	
March .....	6.8	47.6	80.6	29.0	52.4	42.8	2.4	1.9	0.5	0.0	0.0	0.0	1.4	9	8	
April .....	9.2	42.7	63.3	23.3	57.3	34.7	4.0	3.0	1.0	0.0	0.0	0.0	1.3	21	7	
May .....	8.3	43.5	67.7	16.1	56.5	33.2	6.1	2.7	1.5	0.0	0.0	0.0	1.6	14	11	
June .....	9.9	45.2	70.0	26.7	54.8	30.6	7.0	5.2	1.9	0.3	0.0	0.2	5.2	10	12	
July .....	8.9	43.7	61.3	19.4	56.3	31.9	6.0	3.7	1.7	0.2	0.2	0.0	4.1	11	9	
August .....	8.9	43.3	64.5	25.8	56.7	32.8	4.6	3.8	1.5	0.6	0.0	0.0	2.8	9	6	
September .....	9.9	48.3	83.3	23.3	51.7	32.4	7.4	5.9	2.1	0.3	0.2	0.0	4.4	12	8	
October .....	9.2	52.7	74.2	22.6	47.3	40.1	6.4	4.6	1.4	0.2	0.0	0.0	2.6	14	13	
November .....	8.6	58.1	80.0	33.3	41.9	47.1	7.3	2.9	0.8	0.0	0.0	0.0	1.7	9	15	
December .....	7.1	56.5	83.9	25.8	43.5	47.6	5.7	2.6	0.6	0.0	0.0	0.0	1.6	11	10	
Year .....	100.0	49.0	59.8 <sup>1</sup>	24.9 <sup>2</sup>	51.0	39.0	5.3	3.4	1.2	0.1	0.03	0.02	5.2	21 <sup>3</sup>	14 <sup>4</sup>	

MEMPHIS, TENN.

[From March, 1871, to December, 1891, inclusive.]

January .....	10.7	47.6	74.2	22.6	52.4	28.4	7.3	6.9	3.4	1.1	0.5	0.0	4.0	10	10	1 <sup>1882</sup> . 2 <sup>1872</sup> . 3 <sup>June, 1877</sup> . 4 <sup>August, 1872</sup> . 5 <sup>August, 1876; February, 1884</sup> .
February .....	11.0	45.8	69.0	17.2	54.2	24.3	8.8	7.1	4.4	0.9	0.3	0.0	3.2	8	12	
March .....	10.7	45.6	64.5	25.8	54.4	26.5	6.4	6.7	4.5	1.1	0.4	0.0	3.8	11	6	
April .....	10.7	41.4	56.7	23.3	58.6	24.2	6.0	5.2	4.4	1.1	0.5	0.0	4.0	14	7	
May .....	7.0	40.9	61.3	25.8	59.1	26.1	5.8	5.2	2.8	0.8	0.2	0.0	3.2	19	11	
June .....	9.3	43.8	63.3	20.0	56.2	28.7	4.0	7.0	2.8	0.6	0.5	0.2	8.9	16	11	
July .....	5.9	38.9	63.5	16.1	61.1	26.1	7.1	3.4	1.7	0.3	0.3	0.0	3.7	17	10	
August .....	7.0	32.6	58.1	3.2	67.4	20.6	5.3	3.4	2.2	0.8	0.3	0.0	3.8	27	12	
September .....	5.9	30.2	63.3	6.7	69.8	18.9	4.3	3.3	3.2	0.3	0.2	0.0	3.8	17	9	
October .....	5.7	28.6	48.4	6.5	71.4	18.3	3.5	3.5	2.8	0.5	0.0	0.0	3.0	15	6	
November .....	8.9	40.5	63.3	20.0	59.5	23.9	6.4	4.6	4.9	0.6	0.2	0.0	3.2	11	10	
December .....	7.2	41.9	64.5	22.6	58.1	26.9	5.8	6.6	2.0	0.3	0.3	0.0	3.3	14	11	
Year .....	100.0	39.8	51.5 <sup>1</sup>	26.0 <sup>2</sup>	60.2	24.4	5.9	5.2	3.3	0.7	0.3	0.03	8.9 <sup>3</sup>	27 <sup>4</sup>	12 <sup>5</sup>	

## RAINFALL AND SNOW OF THE UNITED STATES.

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TABLE V.—Details of precipitation—Continued.

MILWAUKEE, WIS.

[From November, 1870, to December, 1891, inclusive.]

Month.	Monthly distribution of precipitation.	Percentage of days on which rain fell.			Classification of rainfall: Percentage of days with (or without) rain.								Heaviest rain in one day.	Greatest consecutive No. of days—		Notes.
		Mean.	Max.	Min.	.00	T. to .25	.25 to .50	.51 to 1.00	1.01 to 2.00	2.01 to 3.00	3.01 to 5.00	Over 5.00		Without rain.	With rain.	
	Per ct.												Inches.			
January .....	6.9	49.9	80.6	25.5	50.1	41.8	4.5	2.6	0.8	0.2	0.0	0.0	2.5	11	11	<sup>1</sup> February, 1877.
February .....	5.9	45.7	79.3	10.7	54.3	37.8	4.4	2.9	0.6	0.0	0.0	0.0	1.8	21	11	<sup>2</sup> December, 1877.
March .....	8.4	45.6	64.5	19.4	54.4	34.5	6.0	4.8	0.3	0.0	0.0	0.0	1.8	11	9	
April .....	8.4	42.7	56.7	26.7	57.3	32.9	4.4	2.7	2.5	0.2	0.0	0.0	2.9	13	7	
May .....	9.9	45.5	67.7	19.4	54.5	31.5	7.1	4.9	1.8	0.2	0.0	0.0	2.7	16	9	
June .....	12.1	48.6	66.7	33.3	51.4	32.2	7.3	5.9	2.7	0.5	0.0	0.0	2.5	11	9	
July .....	10.2	43.2	77.4	19.4	56.8	31.8	4.1	4.8	2.2	0.3	0.0	0.0	3.0	12	6	
August .....	9.0	39.0	71.0	19.4	61.0	27.7	4.6	4.9	1.2	0.6	0.0	0.0	2.7	14	10	
September .....	8.7	43.5	70.0	23.3	56.5	32.1	5.2	4.0	1.8	0.2	0.2	0.0	3.7	11	8	
October .....	7.8	40.6	67.7	12.9	59.4	29.8	5.9	3.5	1.4	0.0	0.0	0.0	1.6	15	10	
November .....	6.5	43.2	70.0	13.3	56.8	34.1	4.9	3.6	0.6	0.0	0.0	0.0	1.8	15	10	
December .....	6.2	49.0	74.2	22.6	51.0	41.7	4.0	2.6	0.7	0.0	0.0	0.0	1.4	12	14	
Year .....	100.0	44.7	56.6	29.9	55.3	34.0	5.2	3.9	1.4	0.2	0.02	0.0	3.7	21 <sup>1</sup>	14 <sup>2</sup>	

MOBILE, ALA.

[From January, 1871, to December, 1891, inclusive.]

January .....	7.9	46.1	71.0	16.1	53.9	28.8	5.6	6.5	4.1	0.7	0.4	0.0	3.9	14	10	<sup>1</sup> 1885.
February .....	7.5	42.3	78.6	21.4	57.7	26.4	5.7	4.7	4.5	0.6	0.4	0.0	4.2	9	12	<sup>2</sup> 1876.
March .....	11.8	41.0	70.9	22.6	59.0	22.0	4.8	6.1	5.2	2.0	0.9	0.0	4.1	13	9	<sup>3</sup> September, October, and November, 1874.
April .....	7.9	35.2	43.3	16.7	64.8	21.1	4.3	3.1	4.6	1.7	0.0	0.2	7.3	13	5	<sup>4</sup> July, 1879.
May .....	7.2	31.0	54.8	9.7	69.0	19.3	3.4	4.3	3.2	0.2	0.4	0.0	5.0	18	10	
June .....	9.7	45.4	76.7	23.3	54.6	26.8	6.4	6.7	4.3	0.4	0.6	0.2	6.2	15	9	
July .....	10.3	54.5	77.4	25.8	45.5	34.8	7.9	6.1	4.3	1.0	0.4	0.0	3.7	18	18	
August .....	10.5	49.4	80.6	25.8	50.6	30.1	5.8	7.0	4.1	1.1	1.1	0.2	6.2	12	12	
September .....	8.1	37.4	73.3	10.0	62.6	23.5	5.4	3.7	2.6	1.1	0.9	0.2	6.8	15	9	
October .....	4.9	25.1	67.7	0.0	74.9	16.2	2.3	3.2	2.5	0.7	0.0	0.2	5.2	31	9	
November .....	7.0	32.0	46.7	10.0	68.0	18.1	5.3	4.5	3.1	0.6	0.4	0.0	4.5	17	9	
December .....	7.2	41.9	61.3	19.4	58.1	25.2	7.3	5.2	3.4	0.4	0.4	0.0	4.2	14	8	
Year .....	100.0	40.1	51.5 <sup>1</sup>	29.3 <sup>2</sup>	59.9	24.3	5.4	5.1	3.8	0.9	0.5	0.1	7.3	43 <sup>3</sup>	18 <sup>4</sup>	

MONTGOMERY, ALA.

[From October, 1872, to December, 1891, inclusive.]

January .....	9.3	41.1	58.1	19.4	58.9	23.8	6.2	6.2	4.4	0.5	0.0	0.0	2.6	9	11	<sup>1</sup> 1890.
February .....	10.4	36.9	64.3	17.9	53.1	17.2	5.7	6.8	6.2	0.9	0.0	0.0	3.0	13	7	<sup>2</sup> 1886.
March .....	11.9	36.2	51.0	9.7	63.8	16.1	7.9	5.6	4.8	1.2	0.6	0.0	4.7	22	10	<sup>3</sup> September and October, 1884.
April .....	9.6	30.0	50.0	13.3	70.0	13.6	5.3	9.0	3.5	0.9	0.5	0.0	6.0	13	6	<sup>4</sup> September, 1890.
May .....	7.9	30.0	51.6	9.7	69.1	17.2	5.1	4.6	3.2	0.3	0.5	0.0	3.5	25	6	
June .....	9.2	41.6	63.3	20.0	56.4	24.6	7.0	5.5	3.5	0.8	0.5	0.0	3.4	13	10	
July .....	7.9	36.3	67.7	9.7	63.7	20.7	7.3	4.7	2.4	0.8	0.2	0.0	3.2	17	10	
August .....	7.2	37.2	54.8	9.7	62.8	22.2	6.8	5.1	2.6	0.5	0.0	0.0	2.7	13	7	
September .....	5.8	27.5	66.7	6.7	72.5	17.1	4.4	2.8	2.3	0.5	0.4	0.0	3.3	25	13	
October .....	4.9	20.0	51.6	3.2	80.0	13.0	2.4	1.8	2.1	0.5	0.2	0.0	3.5	25	5	
November .....	6.8	28.2	53.3	13.3	71.8	14.8	5.2	5.2	2.3	0.7	0.0	0.0	3.0	14	7	
December .....	9.1	35.8	54.8	9.7	64.2	20.0	4.3	7.6	2.9	0.8	0.2	0.0	3.4	19	6	
Year .....	100.0	33.5	41.9 <sup>1</sup>	27.4 <sup>2</sup>	66.5	18.4	5.6	5.2	3.3	0.7	0.3	0.02	6.0	46 <sup>3</sup>	13 <sup>4</sup>	

MOORHEAD, MINN.

[From January, 1881, to December, 1891, inclusive.]

January .....	3.3	39.6	58.1	22.2	60.4	37.8	1.5	0.3	0.0	0.0	0.0	0.0	0.5	13	7	<sup>1</sup> 1891.
February .....	3.7	43.5	67.9	17.8	56.5	40.6	2.0	0.3	0.0	0.0	0.0	0.0	0.7	10	9	<sup>2</sup> 1883.
March .....	3.3	39.0	54.8	29.0	61.0	36.0	1.8	1.2	0.0	0.0	0.0	0.0	0.7	9	5	<sup>3</sup> November and December, 1890.
April .....	8.2	36.8	53.3	20.0	61.2	30.9	5.2	1.8	0.9	0.0	0.0	0.0	1.9	11	7	<sup>4</sup> February, 1891.
May .....	10.2	38.1	54.8	22.5	61.9	29.0	3.8	3.5	1.8	0.0	0.0	0.0	1.6	13	6	
June .....	16.7	42.1	60.0	26.0	57.9	26.0	6.4	5.8	3.3	0.6	0.0	0.0	2.6	13	7	
July .....	17.0	44.6	58.0	25.8	55.4	29.1	5.9	6.3	3.0	0.0	0.3	0.0	4.5	11	7	
August .....	11.4	35.8	51.6	19.4	64.2	25.5	5.6	3.2	0.9	0.6	0.0	0.0	2.5	13	5	
September .....	10.2	33.9	56.6	16.6	66.1	25.8	3.3	3.0	1.2	0.3	0.3	0.0	3.8	18	7	
October .....	9.0	30.1	51.6	25.8	63.9	28.8	2.9	2.9	1.2	0.1	0.0	0.0	2.4	13	7	
November .....	3.7	38.8	53.3	13.3	61.2	34.5	3.4	0.6	0.3	0.0	0.0	0.0	1.4	21	7	
December .....	3.3	39.9	54.8	22.2	60.1	38.7	0.6	0.6	0.0	0.0	0.0	0.0	0.7	21	8	
Year .....	100.0	39.2	42.5 <sup>1</sup>	33.7 <sup>2</sup>	60.8	31.9	3.6	2.4	1.1	0.1	0.05	0.0	4.5	21 <sup>3</sup>	9 <sup>4</sup>	

NASHVILLE, TENN.

[From December, 1870, to December, 1891, inclusive.]

January .....	10.6	49.3	80.6	16.1	50.7	29.9	7.4	6.9	4.6	0.5	0.0	0.0	2.8	11	19	<sup>1</sup> 1883.
February .....	10.8	47.9	71.4	17.2	52.1	26.8	7.6	8.3	3.7	1.3	0.0	0.2	5.2	10	8	<sup>2</sup> 1872.
March .....	10.8	48.1	71.0	29.0	51.9	28.7	6.9	7.4	4.0	1.1	0.0	0.0	2.8	14	8	<sup>3</sup> September and October, 1889.
April .....	9.4	44.8	66.7	20.0	55.2	28.1	5.9	6.5	3.0	0.8	0.3	0.2	5.1	10	7	<sup>4</sup> January, 1883.
May .....	6.9	40.9	64.5	19.4	55.2	27.2	6.9	4.0	2.6	0.2	0.0	0.0	2.2	15	10	
June .....	8.4	48.7	70.0	20.0	51.3	31.7	7.0	6.3	3.2	0.5	0.0	0.0	2.6	13	13	
July .....	8.2	40.9	58.1	19.4	59.1	26.0	6.8	5.2	2.0	0.8	0.1	0.0	3.9	10	8	
August .....	7.0	35.8	61.3	12.9	64.2	22.0	6.0	5.1	2.1	0.6	0.0	0.0	2.6	18	7	
September .....	7.6	32.1	63.3	13.3	67.9	19.2	4.8	4.6	2.4	0.8	0.3	0.0	4.2	17	12	
October .....	5.3	28.7	67.7	12.9	71.3	19.4	3.1	4.3	1.8	0.1	0.0	0.0	2.2	15	12	
November .....	8.0	41.4	63.3	23.3	58.6	25.5	6.2	6.0	3.2	0.5	0.0	0.0	2.6	13	7	
December .....	7.0	45.8	67.7	19.4	54.2	32.8	4.7	5.1	2.9	0.3	0.0	0.0	2.6	12	9	
Year .....	100.0	42.0	52.1 <sup>1</sup>	28.2 <sup>2</sup>	58.0	26.4	6.1	5.8	3.0	0.6	0.1	0.03	5.2	23 <sup>3</sup>	19 <sup>4</sup>	

## RAINFALL AND SNOW OF THE UNITED STATES.

TABLE V.—*Details of precipitation*—Continued.

NEW HAVEN, CONN.

[From January, 1873, to December, 1891, inclusive.]

Month.	Monthly distribution of precipitation.	Percentage of days on which rain fell.			Classification of rainfall: Percentage of days with (or without) rain.								Heaviest rain in one day.	Greatest consecutive No. of days—		Notes.
		Mean.	Max.	Min.	.00	T. to .25	.26 to .50	.51 to 1.00	1.01 to 2.00	2.01 to 3.00	3.01 to 5.00	Over 5.00		Without rain.	With rain.	
	<i>Per ct.</i>												<i>Inches.</i>			
January .....	8.6	50.4	64.5	29.0	49.6	33.4	8.2	5.4	2.9	0.5	0.0	0.0	2.5	7	8	<sup>1</sup> 1889.
February .....	8.7	50.9	75.0	32.1	49.1	31.9	9.0	7.3	2.2	0.4	0.2	0.0	4.1	8	6	<sup>2</sup> 1874.
March .....	9.0	47.0	58.0	22.6	53.0	29.7	8.0	6.3	2.2	0.5	0.3	0.0	4.6	9	12	<sup>3</sup> August and September, 1874.
April .....	7.5	46.9	63.3	30.3	53.1	33.2	5.6	5.4	2.3	0.2	0.0	0.2	5.6	13	9	<sup>4</sup> March, 1877; September, 1889.
May .....	6.9	43.5	71.0	29.0	56.5	29.7	6.8	4.9	1.5	0.4	0.2	0.0	3.3	8	9	
June .....	6.5	40.7	60.0	16.6	59.3	28.9	5.1	4.2	1.8	0.7	0.0	0.0	2.6	15	11	
July .....	10.6	42.6	61.3	25.8	57.4	25.8	6.6	5.3	3.2	1.2	0.5	0.0	4.5	9	6	
August .....	10.8	35.7	58.1	9.7	64.3	20.7	5.3	5.1	2.7	1.2	0.3	0.3	7.6	14	6	
September .....	7.9	35.1	60.0	16.6	64.9	22.1	6.0	3.5	2.3	1.0	0.0	0.2	6.2	17	12	
October .....	8.3	38.0	64.5	25.8	62.0	23.9	5.4	4.8	3.2	0.7	0.0	0.0	2.4	13	7	
November .....	7.9	41.2	70.0	20.0	58.8	27.2	5.4	5.3	2.4	0.9	0.0	0.0	2.9	16	8	
December .....	7.3	45.7	61.3	16.1	54.3	31.7	6.1	5.3	2.4	0.0	0.2	0.0	3.8	16	7	
Year .....	100.0	43.1	49.6 <sup>1</sup>	34.5 <sup>2</sup>	56.9	28.2	6.5	5.2	2.4	0.6	0.1	0.1	7.6	24 <sup>3</sup>	14 <sup>4</sup>	

NEW LONDON, CONN.

[From February, 1871, to December, 1891, inclusive.]

January .....	9.0	47.9	67.7	29.0	52.1	31.1	7.0	6.8	2.3	0.5	0.2	0.0	4.0	11	9	<sup>1</sup> 1889.
February .....	8.4	46.7	67.9	17.2	53.3	30.9	6.4	5.8	3.2	0.2	0.0	0.2	6.7	9	11	<sup>2</sup> 1872.
March .....	10.0	45.9	74.2	22.6	54.1	28.5	6.4	7.4	2.9	0.5	0.2	0.0	3.8	9	12	<sup>3</sup> August, 1874.
April .....	7.7	42.1	60.0	16.7	57.9	27.6	7.2	4.4	2.4	0.3	0.2	0.0	4.2	19	9	<sup>4</sup> April, 1871.
May .....	7.1	43.6	67.7	25.8	56.4	30.3	5.5	5.5	1.8	0.5	0.0	0.0	3.0	15	9	<sup>5</sup> June, 1877.
June .....	6.7	40.6	70.0	16.7	59.4	28.0	6.5	3.7	1.3	0.8	0.3	0.0	3.6	13	14	
July .....	8.7	43.3	71.0	25.8	56.7	28.0	6.0	4.8	4.0	0.5	0.0	0.0	2.0	15	8	
August .....	10.2	39.2	58.1	9.7	60.8	24.2	5.8	4.9	2.8	1.1	0.2	0.2	11.8	14	8	
September .....	7.3	36.7	60.0	13.3	63.3	23.8	4.4	5.6	2.1	0.6	0.2	0.0	3.0	17	12	
October .....	9.4	40.7	64.5	25.8	59.3	26.1	5.5	4.9	3.2	0.8	0.2	0.0	4.3	11	7	
November .....	8.4	43.3	63.3	26.7	56.7	27.2	7.3	5.1	2.9	0.5	0.3	0.0	3.3	14	7	
December .....	7.1	45.8	64.5	32.3	54.2	32.0	6.0	5.4	2.4	0.0	0.0	0.0	1.7	13	8	
Year .....	100.0	43.0	55.9 <sup>1</sup>	34.4 <sup>2</sup>	57.0	28.1	6.2	5.4	2.6	0.5	0.2	0.03	11.8 <sup>3</sup>	19 <sup>4</sup>	14 <sup>5</sup>	

NEW ORLEANS, LA.

[From November, 1870, to December, 1891, inclusive.]

January .....	8.6	40.4	77.4	16.1	59.6	24.8	4.3	5.4	4.5	1.1	0.3	0.0	3.7	11	13	<sup>1</sup> 1880.
February .....	7.3	39.6	67.9	21.4	60.3	23.9	5.6	5.4	3.7	0.7	0.2	0.2	5.7	14	13	<sup>2</sup> 1872.
March .....	9.0	35.4	54.8	19.4	64.5	19.8	4.0	5.4	4.6	1.1	0.6	0.0	4.0	14	6	<sup>3</sup> September and October, 1876.
April .....	8.3	31.7	50.0	16.7	68.3	18.7	3.0	4.4	4.1	1.0	0.2	0.3	8.1	16	8	<sup>4</sup> June, 1873; July and August, 1885.
May .....	8.3	35.9	58.1	12.9	64.0	22.1	3.5	4.1	4.6	1.1	0.6	0.0	3.5	18	8	
June .....	10.9	52.5	73.3	26.7	47.5	29.7	6.8	9.8	4.8	1.1	0.3	0.0	5.0	10	17	
July .....	10.3	58.5	77.4	38.7	41.4	38.1	7.4	7.5	4.9	0.3	0.2	0.2	7.5	12	14	
August .....	9.8	51.6	80.6	25.8	48.4	33.8	6.9	5.7	3.2	1.5	0.3	0.2	8.9	16	11	
September .....	7.5	41.7	63.3	10.0	58.3	26.0	6.2	5.1	3.3	0.6	0.2	0.3	7.2	14	8	
October .....	5.5	25.3	48.4	6.5	74.6	16.5	2.5	2.3	2.5	1.1	0.5	0.0	4.0	24	6	
November .....	7.2	34.7	73.3	16.7	65.3	21.2	4.2	4.7	2.9	1.5	0.2	0.0	4.0	17	7	
December .....	7.3	39.7	58.1	6.5	60.3	24.0	5.9	6.2	2.5	0.9	0.3	0.0	3.8	20	9	
Year .....	100.0	40.6	51.1 <sup>1</sup>	30.3 <sup>2</sup>	59.4	24.9	5.0	5.5	3.8	1.0	0.3	0.1	8.9	28 <sup>3</sup>	17 <sup>4</sup>	

NEW YORK, N. Y.

[From November, 1870, to December, 1891, inclusive.]

January .....	8.9	44.4	71.0	12.9	55.6	30.1	6.1	4.8	3.1	0.3	0.0	0.0	2.7	11	7	<sup>1</sup> 1890.
February .....	8.6	44.0	65.5	13.8	56.0	27.8	7.7	5.6	2.5	0.2	0.2	0.0	3.2	15	6	<sup>2</sup> 1872.
March .....	9.1	43.6	67.7	16.0	56.3	28.4	6.5	5.6	2.7	0.3	0.2	0.0	3.4	9	8	<sup>3</sup> February and March, 1872.
April .....	7.5	39.8	56.7	16.7	60.2	26.0	6.3	5.7	1.4	0.2	0.2	0.0	3.5	15	8	<sup>4</sup> September, 1889.
May .....	6.6	37.6	67.7	16.0	62.3	26.5	4.3	4.8	1.8	0.3	0.0	0.0	2.7	16	9	
June .....	7.3	37.0	60.0	20.0	63.0	25.2	4.6	4.3	2.1	0.6	0.2	0.0	3.5	11	8	
July .....	10.0	41.9	54.8	25.8	58.0	25.1	7.5	5.7	2.9	0.6	0.2	0.0	3.8	15	5	
August .....	10.6	36.4	67.7	12.9	63.5	21.3	6.6	3.7	3.2	1.5	0.2	0.0	3.3	13	7	
September .....	8.4	34.8	66.7	16.7	65.2	22.6	4.8	4.0	2.0	1.0	0.2	0.2	6.2	19	12	
October .....	7.7	36.3	54.8	19.4	63.6	23.2	6.9	3.4	2.5	0.2	0.2	0.0	4.0	19	6	
November .....	8.0	38.0	63.3	20.0	62.0	23.8	6.5	4.4	3.0	0.3	0.0	0.0	2.9	12	6	
December .....	7.3	40.9	61.3	16.1	59.0	28.0	5.9	5.0	1.8	0.3	0.0	0.0	2.8	15	8	
Year .....	100.0	39.6	52.1 <sup>1</sup>	27.3 <sup>2</sup>	60.4	25.7	6.1	4.8	2.4	0.5	0.1	0.02	6.2	26 <sup>3</sup>	12 <sup>4</sup>	

NORFOLK, VA.

[From January, 1871, to December, 1891, inclusive.]

January .....	7.2	46.1	74.2	29.0	53.9	30.4	8.4	4.3	2.8	0.2	0.0	0.0	2.2	10	8	<sup>1</sup> 1889.
February .....	7.2	46.7	67.9	17.9	53.3	31.8	4.9	6.6	3.2	0.0	0.2	0.0	3.4	9	6	<sup>2</sup> 1872.
March .....	8.9	43.6	67.9	29.0	56.4	25.8	6.8	6.7	3.8	0.5	0.0	0.0	2.8	11	7	<sup>3</sup> 1889.
April .....	8.2	42.5	60.0	23.3	57.5	29.8	4.3	4.9	2.7	0.3	0.5	0.0	4.6	13	9	<sup>4</sup> September and October, 1884.
May .....	7.6	44.7	64.5	19.4	55.3	28.4	7.2	5.6	3.1	0.2	0.2	0.0	3.8	11	10	<sup>5</sup> July and August, 1889.
June .....	8.4	39.7	63.3	23.3	60.3	22.4	7.9	5.9	2.9	0.6	0.0	0.0	2.6	12	7	
July .....	10.6	47.8	74.2	29.0	52.2	28.0	6.6	8.0	4.1	1.1	0.0	0.0	2.7	11	9	
August .....	12.3	47.8	77.4	6.7	62.2	28.1	6.0	7.2	5.1	0.9	0.3	0.2	3.3	14	13	
September .....	9.3	36.8	73.3	6.5	66.5	20.9	5.6	5.8	2.9	1.0	0.5	0.0	4.2	14	11	
October .....	7.6	33.5	58.1	16.7	63.0	24.4	4.3	4.2	3.4	0.4	0.3	0.0	3.8	21	8	
November .....	5.7	37.0	60.0	16.7	63.0	24.4	5.7	4.0	2.9	0.0	0.0	0.0	2.0	14	7	
December .....	7.0	37.9	58.1	12.9	62.1	24.1	5.5	5.0	2.8	0.5	0.0	0.0	2.5	12	8	
Year .....	100.0	42.0	51.0 <sup>1</sup>	32.0 <sup>2</sup>	58.0	26.2	6.1	5.7	3.3	0.5	0.2	0.02	4.6 <sup>3</sup>	26 <sup>4</sup>	15 <sup>5</sup>	

## RAINFALL AND SNOW OF THE UNITED STATES.

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TABLE V.—Details of precipitation—Continued.

## NORTH PLATTE, NEBR.

[From September, 1874, to December, 1891, inclusive.]

Month.	Monthly dis-tribution of precipitation.	Percentage of days on which rain fell.			Classification of rainfall: Percentage of days with (or without) rain.								Heaviest rain in one day.	Greatest consecutive No. of days—		Notes.
		Mean.	Max.	Min.	.00	T. to .25	.26 to .50	.51 to 1.00	1.01 to 2.00	2.01 to 3.00	3.01 to 5.00	Over 5.00		With-out rain.	With rain.	
	<i>Per ct.</i>												<i>Inches.</i>			
January .....	2.6	24.1	53.5	0.0	75.9	22.9	0.4	0.4	0.0	0.0	0.0	0.0	1.3	31	5	<sup>1</sup> 1879.
February .....	2.1	26.0	53.5	6.9	74.0	25.2	0.6	0.2	0.0	0.0	0.0	0.0	0.6	26	7	<sup>2</sup> 1884.
March .....	3.6	26.2	51.6	6.4	73.8	23.4	1.8	0.8	0.2	0.0	0.0	0.0	1.2	21	7	<sup>3</sup> December 28, 1877, to February 6, 1878.
April .....	11.5	35.1	70.0	10.0	64.9	27.6	3.5	2.4	1.2	0.4	0.0	0.0	2.8	17	8	<sup>4</sup> August and September, 1885.
May .....	15.1	41.4	58.0	29.0	58.6	29.6	6.7	3.6	1.3	0.2	0.0	0.0	2.3	10	6	
June .....	18.2	38.8	66.1	13.3	61.2	26.0	4.3	6.1	1.8	0.6	0.0	0.0	2.3	20	8	
July .....	15.1	37.2	51.6	19.4	61.8	25.8	4.8	4.7	1.3	0.4	0.2	0.0	3.2	17	7	
August .....	13.0	33.0	61.2	12.9	67.0	23.7	4.0	3.8	1.5	0.0	0.0	0.0	1.8	20	10	
September .....	7.8	22.2	40.0	10.0	77.8	17.5	1.0	2.5	1.0	0.2	0.0	0.0	2.4	16	8	
October .....	5.8	21.9	58.1	3.2	78.0	18.3	1.3	1.8	0.6	0.0	0.0	0.0	1.5	28	5	
November .....	2.1	18.2	43.3	3.3	81.8	17.0	1.1	0.1	0.0	0.0	0.0	0.0	0.7	26	8	
December .....	3.1	23.2	61.3	3.2	76.8	21.3	1.1	0.6	0.2	0.0	0.0	0.0	2.0	26	6	
Year .....	100.0	28.9	42.9 <sup>1</sup>	19.5 <sup>2</sup>	71.1	23.2	2.5	2.2	0.8	0.1	0.2	0.0	3.2	42 <sup>3</sup>	11 <sup>4</sup>	

## OLYMPIA, WASH.

[From July, 1877, to December, 1891, inclusive.]

January .....	15.9	68.2	90.3	51.6	31.8	34.3	15.7	12.4	5.3	0.5	0.0	0.0	2.6	8	26	<sup>1</sup> 1882.
February .....	13.5	63.5	89.3	41.4	36.5	35.2	12.6	9.1	5.8	0.8	0.0	0.0	2.6	11	23	<sup>2</sup> 1883.
March .....	9.5	58.3	80.6	25.8	41.7	38.0	9.0	7.1	4.1	0.0	0.0	0.0	1.8	20	18	<sup>3</sup> November, 1877, and December, 1878.
April .....	6.5	54.0	70.0	23.3	46.0	36.2	11.9	4.5	1.4	0.0	0.0	0.0	1.9	13	15	<sup>4</sup> July 31 to September 7, 1885.
May .....	4.4	41.2	71.0	16.1	58.8	29.5	7.8	3.7	0.2	0.0	0.0	0.0	1.2	19	14	<sup>5</sup> January, 1886.
June .....	3.1	40.2	70.0	13.3	59.8	32.9	5.5	1.7	0.2	0.0	0.0	0.0	1.5	21	13	
July .....	1.3	18.7	32.3	3.2	81.3	15.3	2.8	0.2	0.4	0.0	0.0	0.0	1.4	21	6	
August .....	1.3	17.4	29.0	0.0	82.6	13.8	3.0	0.4	0.2	0.0	0.0	0.0	1.1	31	6	
September .....	5.3	32.7	63.3	6.7	67.3	21.6	5.3	3.6	2.0	0.2	0.0	0.0	2.3	18	9	
October .....	8.6	55.9	83.9	29.0	44.1	35.5	11.2	7.5	1.7	0.0	0.0	0.0	1.9	14	13	
November .....	12.4	60.7	86.7	36.7	39.3	36.5	9.8	8.4	5.1	0.4	0.4	0.0	3.6	9	14	
December .....	18.2	72.0	87.1	41.9	28.0	36.6	14.2	14.0	5.4	1.3	0.6	0.0	3.6	9	24	
Year .....	100.0	48.6	56.7 <sup>1</sup>	38.6 <sup>2</sup>	51.4	30.4	9.1	6.0	2.6	0.3	0.1	0.0	3.6 <sup>3</sup>	39 <sup>4</sup>	26 <sup>5</sup>	

## OMAHA, NEBR.

[From January, 1871, to December, 1891, inclusive.]

January .....	2.1	29.8	58.0	9.7	70.2	26.9	2.1	0.8	0.0	0.0	0.0	0.0	0.9	16	6	<sup>1</sup> 1884.
February .....	2.1	31.5	55.0	7.1	68.5	28.9	2.0	0.5	0.1	0.0	0.0	0.0	1.6	17	5	<sup>2</sup> 1873.
March .....	4.9	32.1	51.0	6.4	67.9	25.7	3.4	2.6	0.4	0.0	0.0	0.0	1.1	19	5	<sup>3</sup> December, 1890.
April .....	9.2	38.6	63.0	16.0	61.4	26.8	5.6	4.3	1.4	0.5	0.0	0.0	2.6	11	8	<sup>4</sup> December, 1884.
May .....	13.5	45.0	67.7	22.2	55.0	28.1	6.4	6.1	3.4	1.0	0.0	0.0	3.0	13	11	
June .....	17.0	43.0	68.0	20.0	57.0	25.2	4.5	7.3	4.1	1.6	0.3	0.0	5.0	11	6	
July .....	15.4	38.9	64.5	12.9	61.1	22.7	4.8	6.3	3.1	1.8	0.2	0.0	4.3	15	5	
August .....	9.9	33.0	54.8	9.7	67.0	21.4	4.8	3.6	2.9	0.3	0.0	0.0	2.0	23	6	
September .....	9.9	34.8	60.0	16.0	65.2	23.0	4.0	4.9	2.5	0.2	0.2	0.0	3.7	18	6	
October .....	8.6	26.3	55.0	12.9	73.7	16.4	4.2	3.9	1.2	0.6	0.0	0.0	2.9	22	8	
November .....	3.7	23.0	50.0	6.1	77.0	18.6	1.6	2.2	0.6	0.0	0.0	0.0	1.6	21	4	
December .....	3.1	33.2	68.0	9.7	66.8	29.2	2.6	1.2	0.2	0.0	0.0	0.0	1.1	26	12	
Year .....	100.0	34.1	49.2 <sup>1</sup>	22.7 <sup>2</sup>	65.9	24.4	3.8	3.6	1.7	0.5	0.06	0.0	5.0	26 <sup>3</sup>	12 <sup>4</sup>	

## OSWEGO, N. Y.

[From November, 1870, to December, 1891, inclusive.]

January .....	8.8	69.6	93.5	10.0	30.4	57.3	7.5	3.5	1.1	0.2	0.0	0.0	2.1	10	31	<sup>1</sup> 1885.
February .....	7.1	66.6	93.2	17.9	33.4	54.6	8.3	3.0	0.7	0.0	0.0	0.0	1.6	11	15	<sup>2</sup> 1874.
March .....	8.0	62.7	93.5	25.8	37.3	52.0	6.0	3.7	0.8	0.2	0.0	0.0	2.3	14	19	<sup>3</sup> July, 1877.
April .....	6.0	53.2	90.0	30.0	46.8	43.9	6.2	2.7	0.2	0.2	0.0	0.0	2.2	12	12	<sup>4</sup> August, 1874; August, 1876.
May .....	7.1	53.3	90.3	19.4	46.7	41.6	7.7	2.9	1.1	0.0	0.0	0.0	1.6	13	22	<sup>5</sup> July to August, 1889.
June .....	9.4	52.2	96.7	16.7	47.8	39.2	6.2	4.6	1.9	0.3	0.0	0.0	2.8	14	24	
July .....	9.7	48.8	93.5	22.6	51.2	36.8	5.9	4.3	0.8	0.5	0.5	0.0	2.6	9	16	
August .....	7.1	45.8	100.0	3.2	54.2	37.9	3.2	2.6	1.6	0.3	0.2	0.0	3.1	18	31	
September .....	8.0	51.0	96.7	16.7	49.0	38.6	7.1	4.0	1.0	0.3	0.0	0.0	2.9	15	25	
October .....	9.7	60.5	93.5	29.0	39.5	47.0	7.6	4.5	1.0	0.2	0.2	0.0	3.1	12	17	
November .....	9.4	66.2	93.3	40.0	33.8	52.4	8.6	3.5	1.7	0.0	0.0	0.0	1.8	8	16	
December .....	9.7	69.8	93.5	32.3	30.2	57.2	7.3	3.8	1.3	0.2	0.0	0.0	2.6	8	25	
Year .....	100.0	58.3	86.8 <sup>1</sup>	38.6 <sup>2</sup>	41.7	46.5	6.8	3.6	1.1	0.2	0.1	0.0	3.6 <sup>3</sup>	18 <sup>4</sup>	44 <sup>5</sup>	

## PALESTINE, TEX.

[From December, 1881, to December, 1891, inclusive.]

January .....	11.0	39.4	54.8	12.9	60.6	23.2	6.8	5.2	2.9	1.0	0.3	0.0	3.4	14	6	<sup>1</sup> 1888.
February .....	7.9	35.1	57.1	17.9	64.9	21.6	4.6	4.6	3.9	0.4	0.0	0.0	2.4	13	8	<sup>2</sup> 1891.
March .....	8.7	32.6	35.5	12.9	67.4	20.0	4.2	3.9	3.2	1.0	0.3	0.0	4.6	17	7	<sup>3</sup> November, 1883.
April .....	10.2	39.0	53.3	16.7	61.0	24.0	5.0	5.3	2.7	2.0	0.0	0.0	2.6	13	8	<sup>4</sup> June to July, 1890.
May .....	12.5	35.2	51.6	9.7	64.8	18.4	2.9	8.4	3.2	1.3	1.0	0.0	4.4	13	9	<sup>5</sup> September, 1885.
June .....	7.4	28.3	46.7	10.0	71.7	17.0	3.6	4.0	2.7	0.7	0.3	0.0	3.7	22	4	
July .....	6.2	25.8	51.6	6.5	74.2	16.1	3.6	3.6	1.4	1.1	0.0	0.0	2.6	17	7	
August .....	5.3	23.9	41.9	6.5	76.1	16.1	2.9	2.6	1.3	1.0	0.0	0.0	2.9	15	6	
September .....	6.8	31.3	53.3	16.7	68.7	19.3	6.0	3.0	2.4	0.3	0.3	0.0	4.4	14	10	
October .....	7.2	22.4	38.7	3.2	77.6	12.5	3.9	2.6	2.0	0.7	0.7	0.0	4.4	25	5	
November .....	9.6	30.7	50.0	6.7	69.3	17.4	3.7	4.3	4.3	0.7	0.0	0.3	5.1	14	6	
December .....	7.2	28.4	51.6	12.9	71.6	17.8	4.2	3.5	2.9	0.0	0.0	0.0	3.4	14	5	
Year .....	100.0	31.0	37.0 <sup>1</sup>	23.8 <sup>2</sup>	69.0	18.6	4.3	4.3	2.7	0.8	0.2	0.02	5.1 <sup>3</sup>	36 <sup>4</sup>	10 <sup>5</sup>	

## RAINFALL AND SNOW OF THE UNITED STATES.

TABLE V.—*Details of precipitation*—Continued.

## PENSACOLA, FLA.

[From December, 1879, to December, 1891, inclusive.]

Month.	Monthly dis- tribution of precipitation.	Percentage of days on which rain fell.			Classification of rainfall: Percentage of days with (or without) rain.								Heaviest rain in one day.	Greatest consecutive No. of days—		Notes.
		Mean.	Max.	Min.	.00	T. to .25	.26 to .50	.51 to 1.00	1.01 to 2.00	2.01 to 3.00	3.01 to 5.00	Over 5.00		With- out rain.	With rain.	
	<i>Per ct.</i>												<i>Inches.</i>			
January .....	8.1	46.0	54.8	25.8	54.0	29.6	6.5	5.4	3.2	1.3	0.0	0.0	2.8	11	7	1885.
February ....	6.6	43.1	78.6	31.0	56.9	29.2	5.3	5.3	2.4	0.0	0.0	0.3	5.1	9	11	21889.
March .....	9.4	38.4	67.7	19.4	61.6	23.4	4.6	4.6	3.5	1.6	0.8	0.0	4.0	14	7	31887.
April .....	6.1	30.6	50.0	10.0	69.4	19.2	3.3	4.2	2.8	1.1	0.0	0.0	2.7	19	6	4October 4 to November 8, 1891.
May .....	5.7	30.6	48.4	9.7	69.4	19.9	3.5	4.6	1.9	0.3	0.5	0.0	4.0	18	7	6July 22 to August 3, 1889; July, 1890.
June .....	9.9	43.6	60.0	23.3	56.4	27.8	5.3	5.0	3.9	1.4	0.0	0.3	10.1	12	8	
July .....	11.2	53.8	71.0	22.6	46.2	32.3	8.1	7.8	3.2	1.9	0.5	0.0	3.2	9	13	
August .....	13.6	48.9	80.6	35.5	51.1	28.8	6.7	4.8	4.8	1.9	1.0	0.3	6.1	12	12	
September ..	8.7	37.8	66.7	23.3	62.2	23.3	4.4	3.9	3.6	1.9	0.6	0.0	4.9	14	7	
October .....	5.9	24.5	45.2	6.5	75.5	15.1	2.4	3.2	2.4	1.1	0.3	0.0	3.2	28	6	
November .....	7.4	33.1	60.0	16.7	66.9	20.6	3.6	3.9	2.8	1.4	0.8	0.0	4.1	15	6	
December ...	7.4	36.7	61.3	9.7	63.3	22.8	4.0	6.0	3.0	0.7	0.2	0.0	4.2	28	7	
Year .....	100.0	38.9	42.5 <sup>1</sup>	33.7 <sup>2</sup>	61.1	24.3	4.8	4.9	3.1	1.3	0.4	0.1	10.1 <sup>3</sup>	36 <sup>4</sup>	13 <sup>5</sup>	

## PHILADELPHIA, PA.

[From May, 1872, to December, 1891, inclusive.]

January .....	8.3	48.0	71.0	29.0	52.0	32.6	8.3	5.6	1.2	0.3	0.0	0.0	2.5	13	6	1	1889.
February .....	8.0	50.0	71.4	28.6	50.0	34.2	7.5	5.8	2.6	0.0	0.0	0.0	1.8	8	7	2	1874.
March .....	8.6	51.4	74.2	45.2	48.6	37.0	7.1	5.9	1.2	0.2	0.0	0.0	2.7	7	11	3	September, 1884.
April .....	7.1	44.3	50.7	33.3	55.7	32.3	6.3	3.7	1.8	0.2	0.0	0.0	2.1	14	8	4	September, 1889.
May .....	7.3	43.5	64.5	19.4	50.5	32.7	5.0	4.0	1.8	0.0	0.0	0.0	1.8	13	8		
June .....	8.1	40.7	50.7	23.7	59.3	28.8	4.0	5.0	2.5	0.3	0.0	0.0	2.5	10	8		
July .....	11.0	43.9	61.3	35.5	56.1	28.9	5.2	5.2	4.0	0.6	0.0	0.0	3.0	10	8		
August .....	12.0	42.0	71.0	25.8	58.0	27.9	5.2	3.4	4.4	0.8	0.2	0.2	5.2	10	11		
September .....	8.1	36.0	63.3	13.3	64.0	23.5	5.7	3.8	2.2	0.3	0.5	0.0	4.6	22	12		
October .....	7.3	39.0	58.1	9.7	61.0	29.4	3.9	4.0	1.1	0.6	0.0	0.0	2.7	21	6		
November .....	7.6	40.8	40.0	30.0	59.2	29.3	5.2	4.0	1.8	0.5	0.0	0.0	2.6	12	7		
December .....	6.6	43.1	51.6	16.1	56.9	31.1	6.0	4.7	1.1	0.2	0.0	0.0	2.2	12	7		
Year .....	100.0	43.6	51.0 <sup>1</sup>	37.5 <sup>2</sup>	56.4	30.6	5.8	4.6	2.1	0.3	0.1	0.02	5.2	22 <sup>3</sup>	12 <sup>4</sup>		

## PUNTA RASSA, FLA.

[From September, 1871, to May, 1883, inclusive.]

January .....	5.1	25.3	45.2	3.2	74.7	19.1	1.3	2.4	1.6	0.5	0.3	0.0	3.1	29	6	1	1880.
February .....	3.9	20.9	40.4	7.1	79.1	15.6	0.9	2.9	0.9	0.6	0.0	0.0	2.2	17	5	2	1875.
March .....	3.0	15.9	32.3	3.2	84.1	10.8	3.0	1.3	0.5	0.0	0.3	0.0	3.4	20	4	3	1882.
April .....	4.6	21.9	46.7	6.7	78.1	14.7	2.5	2.5	1.1	0.8	0.3	0.0	3.1	15	6	4	December 18, 1875, to January 22, 1876.
May .....	8.3	33.1	74.2	16.1	66.9	20.4	5.4	4.3	2.4	0.3	0.3	0.0	3.1	14	9	5	July 18 to August 3, 1882.
June .....	11.5	46.7	70.0	20.0	53.3	27.9	9.7	5.5	3.0	0.0	0.3	0.3	6.3	14	9		
July .....	16.6	60.4	80.6	48.4	39.6	34.6	12.6	7.0	4.4	1.5	0.0	0.3	5.1	10	14		
August .....	17.0	63.9	77.4	51.6	36.1	41.0	8.8	6.5	6.2	1.2	0.3	0.0	3.3	6	10		
September .....	16.5	53.1	73.3	33.3	46.9	25.3	11.4	8.3	6.7	1.4	0.0	0.0	2.5	9	14		
October .....	7.1	32.0	58.1	9.7	68.0	22.3	3.5	3.8	1.3	0.8	0.3	0.0	3.6	14	8		
November .....	3.4	22.2	36.7	13.3	77.8	15.8	2.8	2.8	0.8	0.0	0.0	0.0	1.5	17	5		
December .....	3.0	23.4	48.4	9.7	76.6	18.3	3.0	1.6	0.3	0.3	0.0	0.0	2.6	15	4		
Year .....	100.0	34.9	40.2 <sup>1</sup>	29.0 <sup>2</sup>	65.1	22.2	5.4	4.1	2.4	0.6	0.2	0.05	6.3 <sup>3</sup>	36 <sup>4</sup>	17 <sup>5</sup>		

## PITTSBURG, PA.

[From January 1871, to December 1891, inclusive.]

January .....	8.5	66.1	90.3	29.0	33.9	53.1	7.1	5.2	0.5	0.2	0.0	0.0	2.3	7	22	1	1890.
February .....	7.7	61.6	85.7	28.6	38.4	47.2	8.4	5.1	0.7	0.2	0.0	0.0	2.1	7	12	2	1871.
March .....	7.7	59.6	83.9	22.6	40.4	47.5	7.7	3.5	0.9	0.0	0.0	0.0	1.4	9	11	3	August 1888.
April .....	7.2	50.5	70.0	26.7	49.5	40.3	4.4	4.0	1.8	0.0	0.0	0.0	1.8	15	9	4	October, 1874.
May .....	9.0	50.2	80.5	22.6	49.8	33.8	9.8	5.4	1.0	0.2	0.0	0.0	2.3	10	11	5	January, 1882.
June .....	9.6	46.8	80.2	23.3	53.2	30.1	9.2	5.4	1.9	0.2	0.0	0.0	2.5	13	12		
July .....	13.3	47.5	61.3	35.5	52.5	29.8	7.4	5.8	3.7	0.6	0.2	0.0	3.2	9	10		
August .....	8.8	37.9	64.5	16.1	62.1	26.2	4.9	4.6	1.5	0.5	0.2	0.0	3.6	9	7		
September .....	6.7	39.0	60.0	16.7	61.0	28.2	5.2	4.2	1.0	0.2	0.2	0.0	3.4	13	9		
October .....	6.9	43.2	74.2	16.1	56.8	32.9	5.7	3.2	1.4	0.0	0.0	0.0	2.0	17	7		
November .....	6.9	53.5	70.0	33.3	46.5	41.9	7.5	3.0	1.1	0.0	0.0	0.0	1.8	10	11		
December .....	7.7	60.2	93.5	29.0	39.8	48.2	6.9	4.3	0.6	0.2	0.0	0.0	2.4	9	18		
Year .....	100.0	51.3	63.6 <sup>1</sup>	39.2 <sup>2</sup>	48.7	38.3	7.0	4.5	1.3	0.2	0.05	0.0	3.6 <sup>3</sup>	17 <sup>4</sup>	22 <sup>5</sup>		

## PORT HURON, MICH.

[From August, 1874, to December, 1891, inclusive.]

January .....	6.6	59.2	77.4	41.9	40.8	50.9	5.5	2.8	0.0	0.0	0.0	0.0	1.0	9	10	1	1876.
February .....	7.8	57.3	75.0	35.7	42.7	46.0	6.7	3.8	0.8	0.0	0.0	0.0	1.5	6	7	2	1879.
March .....	9.1	53.7	67.7	29.0	46.3	41.4	5.7	5.7	0.9	0.0	0.0	0.0	1.5	18	8	3	March, 1889.
April .....	6.6	44.1	56.7	33.3	55.9	36.5	3.5	3.3	0.8	0.0	0.0	0.0	1.5	13	9	4	September and October, 1888.
May .....	10.0	45.2	67.7	22.6	54.8	34.1	4.6	4.6	1.5	0.4	0.0	0.0	2.2	13	10		
June .....	10.6	47.5	73.3	30.0	52.5	33.0	6.3	5.7	2.5	0.0	0.0	0.0	1.6	9	10		
July .....	8.2	39.3	67.7	22.6	60.7	29.1	3.8	5.3	0.9	0.2	0.0	0.0	2.2	12	10		
August .....	8.5	39.4	64.5	16.1	60.6	30.1	3.0	4.5	1.4	0.2	0.2	0.0	3.2	13	9		
September .....	7.5	39.4	56.7	26.7	60.6	29.2	4.8	3.7	1.7	0.0	0.0	0.0	1.6	12	7		
October .....	9.1	49.8	80.3	29.0	50.2	36.8	7.3	5.0	0.7	0.0	0.0	0.0	1.8	12	16		
November .....	8.8	55.6	76.7	40.0	44.4	44.4	6.0	3.3	1.9	0.0	0.0	0.0	1.6	11	10		
December .....	7.2	60.0	87.1	32.2	40.0	52.5	3.8	3.5	0.2	0.0	0.0	0.0	1.1	9	10		
Year .....	100.0	49.2	57.9 <sup>1</sup>	43.3 <sup>2</sup>	50.8	38.6	5.1	4.3	1.1	0.1	0.02	0.0	3.2	18 <sup>3</sup>	21 <sup>4</sup>		



# RAINFALL AND SNOW OF THE UNITED STATES.

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TABLE V.—Details of precipitation—Continued.

## PORTLAND, ME.

[From January, 1870, to December, 1891, inclusive.]

Month.	Monthly distribution of precipitation.	Percentage of days on which rain fell.			Classification of rainfall: Percentage of days with (or without) rain.								Heaviest rain in one day.	Greatest consecutive No. of days—		Notes.
		Mean.	Max.	Min.	.00	T. to .25	.26 to .50	.51 to 1.00	1.01 to 2.00	2.01 to 3.00	3.01 to 5.00	Over 5.00		Without rain.	With rain.	
	<i>Per ct.</i>												<i>Inches.</i>			
January .....	8.6	48.7	71.0	22.6	51.3	34.1	6.8	5.3	2.3	0.2	0.0	0.0	2.3	12	11	<sup>1</sup> 1884.
February .....	8.6	46.0	72.4	10.7	54.0	30.8	7.2	5.0	2.7	0.3	0.0	0.0	2.3	15	6	<sup>2</sup> 1872.
March .....	8.2	49.3	71.0	22.6	50.7	35.9	6.0	4.9	2.3	0.2	0.0	0.0	3.1	9	10	<sup>3</sup> October, 1873.
April .....	7.0	39.5	70.0	23.3	60.5	27.5	5.9	4.4	1.4	0.3	0.0	0.0	2.4	14	11	<sup>4</sup> May, 1871.
May .....	7.7	43.8	61.3	19.4	56.2	30.0	6.9	4.3	2.0	0.0	0.0	0.0	1.9	20	10	<sup>5</sup> April, 1878, and January, 1879.
June .....	7.9	43.3	60.0	23.3	56.7	29.8	6.5	4.5	1.9	0.6	0.0	0.0	2.6	9	7	
July .....	8.9	45.3	61.3	25.8	54.7	31.6	5.2	5.8	2.2	0.5	0.0	0.0	2.6	13	10	
August .....	8.4	39.3	61.3	9.7	60.7	27.8	4.8	3.8	2.5	0.9	0.0	0.0	2.4	14	10	
September .....	7.5	36.2	56.7	16.7	63.8	24.9	3.9	4.5	2.7	0.3	0.0	0.0	2.7	16	10	
October .....	9.3	39.2	58.1	19.4	60.8	25.0	6.9	3.9	2.3	0.9	0.2	0.0	3.9	15	8	
November .....	9.5	44.6	66.7	26.7	55.4	30.0	6.5	4.9	2.3	0.6	0.3	0.0	3.2	10	7	
December .....	8.4	45.0	61.3	22.6	55.0	29.5	8.9	4.3	1.8	0.5	0.0	0.0	2.6	12	7	
Year .....	100.0	43.4	52.6 <sup>1</sup>	32.0 <sup>2</sup>	56.6	29.8	6.3	4.6	2.2	0.4	0.4	0.0	3.9 <sup>3</sup>	20 <sup>4</sup>	11 <sup>5</sup>	

## PORTLAND, OREG.

[From January, 1872, to December, 1891, inclusive.]

January .....	14.9	66.1	90.3	29.0	33.8	38.2	13.4	9.7	4.2	0.3	0.2	0.2	5.6	15	27	<sup>1</sup> 1881 and 1891.
February .....	13.5	65.1	96.6	28.6	34.8	38.4	10.8	10.1	5.0	0.7	0.2	0.0	3.8	11	24	<sup>2</sup> 1872.
March .....	12.2	62.6	87.1	25.8	37.4	38.6	11.4	8.4	4.0	0.2	0.0	0.0	2.2	21	20	<sup>3</sup> June and July, 1883.
April .....	6.8	53.3	73.3	20.0	46.7	38.3	8.6	5.7	0.7	0.0	0.0	0.0	1.4	12	15	<sup>4</sup> February and November, 1872.
May .....	5.4	43.1	83.9	22.4	56.9	32.8	7.3	2.7	0.3	0.0	0.0	0.0	1.4	15	14	
June .....	4.0	40.5	76.7	10.0	59.5	32.5	4.8	3.0	0.2	0.0	0.0	0.0	1.8	26	16	
July .....	1.2	16.1	58.1	0.0	83.9	13.4	1.9	0.6	0.2	0.0	0.0	0.0	1.1	31	7	
August .....	1.2	14.2	58.5	0.0	85.8	11.1	2.4	0.7	0.0	0.0	0.0	0.0	0.8	31	6	
September .....	3.5	27.7	60.0	0.0	72.3	19.2	3.8	4.2	0.5	0.0	0.0	0.0	1.2	30	7	
October .....	8.3	48.1	80.6	16.1	51.0	30.8	9.2	5.2	2.4	0.5	0.0	0.0	3.0	18	19	
November .....	12.4	57.2	80.0	33.3	42.8	34.3	9.0	10.0	2.7	0.7	0.5	0.0	3.6	10	12	
December .....	16.6	64.8	83.9	29.0	35.2	32.4	14.3	13.0	3.9	0.8	0.2	0.2	6.7	14	19	
Year .....	100.0	46.6	55.9 <sup>1</sup>	38.8 <sup>2</sup>	53.4	30.0	8.1	6.1	2.0	0.3	0.1	0.03	6.7	57 <sup>3</sup>	40 <sup>4</sup>	

## RIO GRANDE CITY, TEX.

[From January, 1876, to December, 1891, inclusive.]

January .....	5.4	17.7	38.7	0.0	82.3	14.7	1.2	0.8	1.0	0.0	0.0	0.0	1.8	31	6	<sup>1</sup> 1889.
February .....	4.5	17.7	57.1	0.0	82.3	13.9	1.8	1.3	0.7	0.0	0.0	0.0	1.8	29	7	<sup>2</sup> 1883.
March .....	4.9	18.1	32.3	6.5	81.9	14.3	1.2	2.2	0.2	0.2	0.0	0.0	2.2	29	5	<sup>3</sup> September, 1884.
April .....	5.9	13.1	33.3	0.0	86.9	8.8	2.3	0.8	0.8	0.2	0.2	0.0	3.7	30	5	<sup>4</sup> July to September, 1884.
May .....	11.3	19.0	33.3	6.5	81.0	11.3	2.2	2.7	1.8	0.4	0.6	0.0	4.4	29	5	<sup>5</sup> August, 1880.
June .....	11.8	15.2	30.0	0.0	84.8	9.8	1.9	1.7	1.2	0.4	0.2	0.0	4.4	30	4	
July .....	6.9	14.2	38.7	0.0	85.8	9.1	2.7	2.0	0.2	0.0	0.2	0.0	3.5	31	4	
August .....	12.8	20.9	45.2	0.0	79.1	13.3	2.0	3.2	1.5	0.7	0.2	0.0	4.2	31	6	
September .....	17.2	29.1	56.7	3.3	70.9	18.9	3.1	3.1	2.5	1.3	0.0	0.2	5.6	29	9	
October .....	18.3	38.7	3.2	0.0	81.7	11.8	3.4	1.0	1.7	0.2	0.2	0.0	5.6	29	7	
November .....	9.9	18.3	38.7	0.0	82.4	14.5	1.6	1.3	0.7	0.0	0.0	0.0	3.6	30	4	
December .....	4.5	17.6	33.3	6.5	80.6	15.9	1.1	2.0	0.2	0.2	0.0	0.0	1.1	30	5	
Year .....	100.0	18.4	24.9 <sup>1</sup>	11.2 <sup>2</sup>	81.6	13.0	2.0	1.9	1.0	0.3	0.1	0.02	5.6 <sup>3</sup>	71 <sup>4</sup>	9 <sup>5</sup>	

## ROCHESTER, N. Y.

[From November, 1870, to December, 1891, inclusive.]

January .....	9.1	66.7	90.3	41.9	33.3	55.2	5.8	4.6	0.9	0.2	0.0	0.0	2.1	6	21	<sup>1</sup> 1890.
February .....	7.7	61.0	85.7	25.0	39.0	50.4	6.9	2.7	1.0	0.0	0.0	0.0	1.6	11	13	<sup>2</sup> 1877.
March .....	8.8	57.8	87.1	29.0	42.2	46.4	6.3	4.0	0.9	0.2	0.0	0.0	2.1	14	10	<sup>3</sup> August, September, and October, 1889.
April .....	7.1	41.4	56.7	23.3	48.6	30.6	5.8	4.0	1.0	0.0	0.0	0.0	1.8	12	8	<sup>4</sup> January, 1890.
May .....	8.2	39.3	80.6	19.4	60.7	26.0	6.6	4.6	1.2	0.0	0.0	0.0	1.9	13	15	
June .....	9.4	40.5	56.7	20.0	59.5	28.2	6.7	2.8	2.8	0.0	0.0	0.0	1.8	10	8	
July .....	8.8	37.7	54.8	22.6	62.3	21.7	7.7	3.7	1.3	0.3	0.0	0.0	2.1	10	6	
August .....	8.5	34.5	54.8	6.5	65.5	24.5	4.5	3.4	1.6	0.2	0.3	0.0	3.3	14	7	
September .....	7.1	37.5	50.0	13.3	62.5	27.8	5.2	3.5	0.8	0.2	0.0	0.0	2.1	11	7	
October .....	9.1	48.9	74.2	22.6	51.1	37.1	5.8	3.2	1.4	0.2	0.2	0.0	3.8	15	7	
November .....	8.2	53.2	73.3	36.7	46.8	41.2	7.4	3.2	1.2	0.2	0.0	0.0	2.1	13	10	
December .....	8.0	63.0	48.4	12.9	37.0	51.4	8.2	3.1	0.3	0.0	0.0	0.0	1.6	8	14	
Year .....	100.0	48.5	67.9 <sup>1</sup>	38.9 <sup>2</sup>	51.5	37.1	6.5	3.6	1.2	0.1	0.04	0.0	3.8	15 <sup>3</sup>	21 <sup>4</sup>	

## ROSEBURG, OREG.

[From August, 1877, to December, 1891, inclusive.]

January .....	18.1	64.5	93.5	35.5	35.5	40.8	11.5	7.6	2.8	1.8	0.0	0.0	2.8	15	21	<sup>1</sup> 1891.
February .....	14.5	65.1	89.0	32.1	34.9	44.6	7.6	8.6	4.1	0.3	0.0	0.0	2.9	9	19	<sup>2</sup> 1890.
March .....	9.4	50.5	71.0	22.6	49.5	35.3	10.1	3.7	1.4	0.0	0.0	0.0	1.9	21	11	<sup>3</sup> 1 rainfall not considered in monthly columns, the month of November, 1885, when it fell not being complete.
April .....	7.4	40.0	63.3	26.7	51.0	36.9	8.3	3.1	0.7	0.0	0.0	0.0	1.1	16	13	<sup>4</sup> 1885.
May .....	5.4	38.0	64.5	19.4	61.1	30.4	6.2	1.8	0.5	0.0	0.0	0.0	1.5	17	7	<sup>5</sup> June 30 to August 17, 1889.
June .....	4.0	29.0	76.0	6.7	71.0	23.8	3.8	1.0	0.5	0.0	0.0	0.0	1.6	27	8	<sup>6</sup> January 15 to February 19, 1878.
July .....	1.4	12.4	29.0	0.0	77.6	10.4	0.9	0.7	0.5	0.0	0.0	0.0	1.1	31	5	
August .....	0.9	8.4	16.1	0.0	91.6	7.3	0.9	0.2	0.2	0.0	0.0	0.0	1.0	31	4	
September .....	2.3	23.1	53.3	6.7	76.9	20.4	1.6	0.9	0.2	0.0	0.0	0.0	1.2	28	11	
October .....	8.0	43.0	74.2	16.1	57.0	29.7	8.0	4.7	0.6	0.0	0.0	0.0	1.4	17	16	
November .....	10.2	48.3	86.7	13.3	51.7	35.7	6.4	3.8	2.4	0.0	0.0 <sup>3</sup>	0.0	3.1 <sup>4</sup>	15	11	
December .....	18.4	64.9	90.3	38.7	35.1	41.3	10.1	8.0	4.7	0.9	0.0	0.0	2.9	13	18	
Year .....	100.0	41.4	51.2 <sup>1</sup>	33.2 <sup>2</sup>	58.6	29.7	6.3	3.7	1.5	0.2	0.0	0.0	3.1 <sup>4</sup>	49 <sup>5</sup>	36 <sup>6</sup>	

## RAINFALL AND SNOW OF THE UNITED STATES.

TABLE V.—Details of precipitation—Continued.

SACRAMENTO, CAL.

[From July, 1877, to December, 1891, inclusive.]

Month.	Monthly distribution of precipitation.	Percentage of days on which rain fell.			Classification of rainfall: Percentage of days with (or without) rain.								Heaviest rain in one day.	Greatest consecutive No. of days—		Notes.
		Mean.	Max.	Min.	.00	T. to .25	.26 to .50	.51 to 1.00	1.01 to 2.00	2.01 to 3.00	3.01 to 5.00	Over 5.00		Without rain.	With rain.	
	<i>Per ct.</i>												<i>Inches.</i>			
January .....	18.7	34.6	64.5	19.4	65.4	21.7	4.8	4.8	2.8	0.5	0.0	0.0	2.7	18	11	1889.
February .....	14.7	33.2	64.3	14.3	66.8	20.0	4.8	5.1	3.3	0.0	0.0	0.0	1.9	15	8	1883.
March .....	14.7	36.2	58.1	12.9	63.8	23.7	5.8	5.1	1.2	0.5	0.0	0.0	2.6	24	12	1880.
April .....	9.1	30.5	56.7	6.7	69.5	20.0	6.0	3.3	0.7	0.0	0.2	0.2	5.3	20	9	May 9 to October 15, 1886.
May .....	3.6	14.1	35.5	3.2	85.9	10.6	1.8	1.4	0.2	0.0	0.0	0.0	1.9	23	5	November 29 to December 13, 1889.
June .....	0.5	7.4	33.3	0.0	92.6	6.7	0.5	0.2	0.0	0.0	0.0	0.0	0.8	30	7	
July .....	0.3	2.2	6.5	0.0	97.8	2.2	0.0	0.0	0.0	0.0	0.0	0.0	1.1	31	1	
August .....	0.3	1.5	6.5	0.0	98.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	1.1	31	2	
September .....	0.5	6.2	20.0	0.0	93.8	4.7	1.1	0.4	0.0	0.0	0.0	0.0	0.8	30	3	
October .....	4.1	13.5	41.9	0.0	86.5	9.9	1.7	0.9	1.1	0.0	0.0	0.0	1.8	31	6	
November .....	10.2	18.7	70.0	0.0	81.3	11.6	3.1	2.7	0.9	0.2	0.2	0.0	3.1	30	8	
December .....	23.3	38.1	80.6	12.9	61.9	23.0	5.2	6.9	2.4	0.6	0.0	0.0	2.8	20	13	
Year .....	100.0	19.7	26.3 <sup>1</sup>	15.6 <sup>2</sup>	80.3	13.0	2.9	2.6	1.0	0.2	0.03	0.01	5.3 <sup>3</sup>	160 <sup>4</sup>	15 <sup>5</sup>	

SALT LAKE CITY, UTAH.

[From March, 1874, to December, 1891, inclusive.]

January .....	8.2	35.7	71.0	9.7	64.3	30.0	4.9	0.2	0.0	0.0	0.0	0.0	0.6	22	11	1891.
February .....	9.2	32.5	53.6	14.3	67.5	26.9	4.2	1.2	0.2	0.0	0.0	0.0	1.3	15	8	1880.
March .....	10.8	32.4	54.8	6.5	67.6	23.6	5.4	3.2	0.2	0.0	0.0	0.0	1.2	23	7	June and July, 1880.
April .....	10.3	32.0	53.3	16.7	68.0	21.3	6.5	3.5	0.7	0.0	0.0	0.0	1.4	16	7	January, 1887.
May .....	10.3	23.8	51.6	3.2	76.2	15.6	5.0	2.7	0.5	0.0	0.0	0.0	1.4	28	7	
June .....	6.2	14.8	26.7	3.3	85.2	11.7	2.0	0.9	0.2	0.0	0.0	0.0	2.0	21	4	
July .....	5.0	13.3	45.2	0.0	86.7	11.2	1.6	0.5	0.0	0.0	0.0	0.0	0.7	31	4	
August .....	7.2	19.2	35.5	3.2	80.8	15.4	2.7	1.1	0.0	0.0	0.0	0.0	0.6	27	7	
September .....	5.1	13.3	40.0	3.3	86.7	9.2	2.1	1.6	0.4	0.0	0.0	0.0	1.7	28	5	
October .....	9.2	22.0	41.9	3.2	78.0	14.0	4.6	3.4	0.0	0.0	0.0	0.0	0.9	29	6	
November .....	7.7	24.4	53.3	3.3	75.6	18.1	4.4	1.7	0.2	0.0	0.0	0.0	1.6	24	7	
December .....	10.8	33.7	74.2	9.7	66.3	26.9	4.8	2.0	0.0	0.0	0.0	0.0	0.9	21	8	
Year .....	100.0	24.8	37.0 <sup>1</sup>	19.1 <sup>2</sup>	75.2	18.7	4.0	1.9	0.2	0.0	0.0	0.0	2.0	47 <sup>3</sup>	11 <sup>4</sup>	

SAN DIEGO, CAL.

[From October, 1874, to December, 1891, inclusive.]

January .....	16.3	21.4	38.7	6.5	78.6	13.3	3.8	2.8	1.3	0.2	0.0	0.0	2.5	25	6	1884.
February .....	21.5	26.2	60.7	3.6	73.8	16.4	3.9	4.2	1.7	0.0	0.0	0.0	2.0	25	11	1877 and 1881.
March .....	10.2	24.9	61.3	9.7	75.1	17.2	4.4	2.7	0.6	0.0	0.0	0.0	1.4	25	9	1879.
April .....	10.2	20.2	33.3	6.7	79.8	16.4	1.8	1.8	0.2	0.0	0.0	0.0	1.1	22	6	May 30 to October 12, 1877.
May .....	3.1	14.6	29.0	3.2	85.4	13.1	0.9	0.4	0.2	0.0	0.0	0.0	1.1	28	4	February, 1890.
June .....	1.0	6.3	16.7	0.0	93.7	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.2	30	2	
July .....	1.0	2.5	12.9	0.0	97.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.1	31	3	
August .....	1.0	4.0	9.7	0.0	96.0	3.8	0.2	0.0	0.0	0.0	0.0	0.0	0.3	31	1	
September .....	1.0	4.3	16.7	0.0	95.7	3.9	0.4	0.0	0.0	0.0	0.0	0.0	0.4	30	3	
October .....	3.1	10.9	25.8	0.0	89.1	10.0	0.2	0.4	0.3	0.0	0.0	0.0	1.8	31	4	
November .....	10.2	12.8	30.0	3.3	87.2	9.3	2.0	1.1	0.2	0.2	0.0	0.0	2.8	24	5	
December .....	21.4	23.1	67.7	3.2	76.9	14.5	3.7	2.7	2.0	0.2	0.0	0.0	2.2	25	10	
Year .....	100.0	14.3	26.0 <sup>1</sup>	8.8 <sup>2</sup>	85.7	10.6	1.8	1.3	0.5	0.05	0.0	0.0	2.8 <sup>3</sup>	136 <sup>4</sup>	11 <sup>5</sup>	

SAN FRANCISCO, CAL.

[From April, 1871, to December, 1891, inclusive.]

January .....	21.0	40.6	76.1	19.4	59.4	23.5	6.8	6.3	3.5	0.3	0.2	0.0	4.7	18	19	1888.
February .....	15.5	40.5	75.0	10.7	59.5	24.1	6.6	6.8	2.5	0.4	0.2	0.0	4.4	22	13	1872.
March .....	13.5	37.4	66.8	16.1	62.6	24.5	5.6	5.0	1.9	0.3	0.0	0.0	2.7	21	12	1877.
April .....	8.0	29.9	63.3	6.7	70.1	21.6	4.1	1.9	2.2	0.0	0.0	0.0	1.8	26	11	May to September, 1880.
May .....	2.9	15.5	38.7	0.0	84.5	13.4	0.6	1.2	0.3	0.0	0.0	0.0	1.3	31	5	January, 1878.
June .....	0.4	9.7	36.7	0.0	90.3	8.6	0.8	0.3	0.0	0.0	0.0	0.0	1.0	30	4	
July .....	0.05	2.9	9.7	0.0	97.1	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.4	31	4	
August .....	0.05	1.5	6.5	0.0	98.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.1	31	1	
September .....	0.8	6.7	23.3	0.0	93.3	5.9	0.6	0.3	0.0	0.0	0.0	0.0	0.9	30	4	
October .....	3.7	14.4	45.1	0.0	85.6	9.7	1.5	1.8	1.4	0.0	0.0	0.0	1.6	31	7	
November .....	11.8	24.3	71.0	0.0	75.7	15.4	3.5	2.5	2.2	0.5	0.2	0.0	4.0	30	11	
December .....	22.3	38.1	67.7	0.0	61.9	19.4	8.6	5.1	4.1	0.5	0.2	0.0	3.1	31	13	
Year .....	100.0	21.8	29.5 <sup>1</sup>	13.7 <sup>2</sup>	78.2	14.2	3.2	2.6	1.5	0.2	0.1	0.0	4.7	142 <sup>3</sup>	19 <sup>4</sup>	

SANTA FE, N. MEX.

[From January, 1872, to December, 1891, inclusive.]

January .....	4.1	22.4	35.5	9.7	77.6	21.2	1.0	0.2	0.0	0.0	0.0	0.0	0.6	22	7	1885.
February .....	6.1	28.0	46.4	13.8	72.0	25.3	1.9	0.8	0.0	0.0	0.0	0.0	0.6	20	4	1872.
March .....	4.8	33.4	41.9	3.2	76.6	21.5	1.7	0.2	0.0	0.0	0.0	0.0	0.6	25	8	July, 1875.
April .....	5.4	25.3	53.3	6.7	74.7	22.3	2.1	0.7	0.2	0.0	0.0	0.0	1.3	17	7	November and December, 1872.
May .....	5.4	24.6	51.6	3.2	75.4	21.0	2.9	0.7	0.0	0.0	0.0	0.0	0.8	17	6	August and September, 1878.
June .....	8.2	25.6	46.7	6.7	74.4	21.3	3.0	0.6	0.7	0.0	0.0	0.0	1.2	23	9	
July .....	18.4	52.3	67.7	32.3	47.7	41.0	7.2	2.5	1.6	0.0	0.0	0.0	1.5	9	13	
August .....	18.4	45.5	64.5	25.8	34.5	34.7	5.6	4.1	1.1	0.0	0.0	0.0	1.4	12	10	
September .....	10.9	27.6	50.0	13.3	72.4	20.7	4.5	1.7	0.7	0.0	0.0	0.0	1.4	23	7	
October .....	6.8	15.8	45.2	0.0	84.2	10.9	3.1	1.6	0.2	0.0	0.0	0.0	1.2	31	5	
November .....	6.1	19.0	40.0	3.3	81.0	15.6	2.4	0.8	0.2	0.0	0.0	0.0	1.1	25	6	
December .....	5.4	23.5	45.2	6.5	76.5	20.4	2.2	0.5	0.4	0.0	0.0	0.0	1.1	27	5	
Year .....	100.0	27.7	33.2 <sup>1</sup>	20.5 <sup>2</sup>	72.3	23.0	3.1	1.2	0.4	0.0	0.0	0.0	1.5 <sup>3</sup>	52 <sup>4</sup>	14 <sup>5</sup>	

## RAINFALL AND SNOW OF THE UNITED STATES.

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TABLE V.—Details of precipitation—Continued.

SAVANNAH, GA.

[From January, 1871, to December, 1891, inclusive.]

Month.	Monthly distribution of precipitation.	Percentage of days on which rain fell.			Classification of rainfall: Percentage of days with (or without) rain.								Heaviest rain in one day.	Greatest consecutive No. of days—		Notes.
		Mean.	Max.	Min.	.00	.1 to .25	.26 to .50	.51 to 1.00	1.01 to 2.00	2.01 to 3.00	3.01 to 5.00	Over 5.00		Without rain.	With rain.	
January .....	Per ct. 6.4	35.5	58.1	9.7	64.5	24.1	4.4	4.2	2.3	0.3	0.2	0.0	3.5	21	7	<sup>1</sup> 1891. <sup>2</sup> 1871. <sup>3</sup> November and December, 1889. <sup>4</sup> July, 1886.
February .....	5.8	39.3	71.4	21.4	60.7	26.3	6.6	4.4	1.8	0.0	0.2	0.0	3.1	13	10	
March .....	7.4	33.1	51.6	19.4	66.9	18.9	5.4	5.7	2.8	0.2	0.2	0.0	3.3	16	5	
April .....	7.2	30.6	46.7	13.3	69.4	18.7	4.8	3.6	2.1	1.0	0.5	0.0	3.8	21	5	
May .....	5.6	30.1	51.6	16.1	69.9	19.2	5.1	4.1	1.4	0.2	0.2	0.0	3.2	18	8	
June .....	13.1	45.7	60.0	20.0	54.3	26.0	7.9	4.0	5.2	1.6	0.8	0.2	5.4	14	8	
July .....	10.2	45.3	71.0	9.7	54.7	28.3	6.3	5.1	4.4	1.1	0.2	0.0	3.1	14	17	
August .....	14.7	51.3	67.7	32.3	48.7	28.8	8.8	6.0	6.0	0.6	0.8	0.3	8.6	11	10	
September .....	10.8	39.2	67.7	23.3	60.8	21.3	4.9	7.8	3.2	1.1	1.0	0.0	4.9	16	9	
October .....	7.2	27.2	42.0	6.5	72.8	17.2	2.5	3.4	2.3	1.7	0.2	0.0	4.4	25	6	
November .....	1.1	27.0	56.7	16.7	73.0	18.3	4.1	3.0	1.4	0.2	0.0	0.0	2.1	18	6	
December .....	7.5	32.0	61.3	3.2	66.0	20.7	5.0	2.8	2.9	0.3	0.3	0.0	3.5	30	9	
Year .....	100.0	36.4	41.6 <sup>1</sup>	28.8 <sup>2</sup>	63.6	22.3	5.5	4.5	3.0	0.7	0.4	0.04	8.6	32 <sup>3</sup>	17 <sup>4</sup>	

SHREVEPORT, LA.

[From October, 1871, to December, 1891, inclusive.]

January .....	9.9	44.8	77.4	22.6	55.2	28.4	6.1	5.6	4.0	0.3	0.2	0.2	5.7	14	9	<sup>1</sup> 1885. <sup>2</sup> 1872. <sup>3</sup> October and November, 1874. <sup>4</sup> October and November, 1885.
February .....	9.0	39.6	64.3	14.3	60.4	23.0	5.5	6.2	4.1	0.7	0.2	0.0	3.2	15	8	
March .....	9.1	39.0	64.5	22.6	61.0	23.1	6.0	6.0	3.1	0.6	0.3	0.0	4.4	18	10	
April .....	10.7	37.5	60.0	20.0	62.5	21.0	5.2	4.7	5.3	1.0	0.3	0.0	4.2	14	11	
May .....	8.5	34.4	74.2	12.9	65.6	22.3	4.4	3.9	2.7	0.6	0.2	0.3	6.5	17	15	
June .....	7.1	36.2	53.3	10.0	63.8	22.5	4.8	5.8	1.8	1.2	0.0	0.0	2.2	20	11	
July .....	7.3	38.4	71.0	12.9	61.6	26.1	4.8	4.1	2.7	0.3	0.3	0.0	4.5	20	14	
August .....	4.2	29.8	67.7	9.7	70.2	22.4	3.1	2.9	1.3	0.0	0.2	0.0	3.5	12	10	
September .....	8.5	30.3	80.0	6.7	69.7	19.8	3.0	3.5	2.3	1.0	0.3	0.3	6.9	28	15	
October .....	6.7	28.9	80.6	3.2	71.1	19.4	3.7	2.3	2.2	1.1	0.3	0.0	4.2	24	16	
November .....	9.4	37.0	76.7	20.0	63.0	21.3	5.2	4.4	4.3	1.3	0.5	0.0	3.8	15	12	
December .....	9.6	34.3	71.0	9.7	65.6	21.7	4.3	3.1	3.7	1.1	0.6	0.0	4.7	19	8	
Year .....	100.0	35.9	61.6 <sup>1</sup>	25.4 <sup>2</sup>	64.1	22.6	4.7	4.4	3.1	0.8	0.3	0.1	6.9	39 <sup>3</sup>	28 <sup>4</sup>	

SPOKANE, WASH.

[From September, 1880, to December, 1891, inclusive.]

January .....	14.0	55.2	87.1	22.6	44.8	44.8	7.1	2.6	0.6	0.0	0.0	0.0	1.4	19	20	<sup>1</sup> 1887, 1890, 1891. <sup>2</sup> 1883. <sup>3</sup> June, 1888. <sup>4</sup> June 13 to August 15, 1883. <sup>5</sup> January 12 to February 6, 1890.
February .....	11.2	50.3	71.4	20.7	49.7	39.4	7.1	3.9	0.0	0.0	0.0	0.0	0.8	9	10	
March .....	7.3	37.5	61.3	16.1	62.5	32.0	5.0	0.6	0.0	0.0	0.0	0.0	0.7	23	9	
April .....	6.1	38.8	60.0	10.0	61.2	35.2	3.3	0.0	0.3	0.0	0.0	0.0	1.1	20	10	
May .....	6.7	33.1	51.6	16.1	66.9	27.6	3.8	1.8	0.0	0.0	0.0	0.0	0.9	21	6	
June .....	11.2	43.3	76.7	6.7	56.7	34.5	6.7	0.9	0.9	0.3	0.0	0.0	2.2	19	13	
July .....	3.9	20.5	38.7	0.0	79.5	17.0	2.6	0.3	0.6	0.0	0.0	0.0	1.2	31	7	
August .....	2.2	14.4	29.0	3.2	85.6	12.3	1.5	0.6	0.0	0.0	0.0	0.0	0.7	26	5	
September .....	5.6	26.7	50.0	10.0	73.3	23.3	2.8	0.0	0.6	0.0	0.0	0.0	1.1	19	5	
October .....	9.5	44.1	58.1	16.1	55.9	36.6	6.2	1.1	0.3	0.0	0.0	0.0	1.1	15	8	
November .....	7.8	48.3	66.7	16.7	51.7	43.9	3.1	1.1	0.3	0.0	0.0	0.0	1.4	12	10	
December .....	14.5	61.8	87.1	29.0	38.2	50.0	8.6	3.2	0.0	0.0	0.0	0.0	0.8	13	14	
Year .....	100.0	39.5	44.9 <sup>1</sup>	29.6 <sup>2</sup>	60.5	33.0	4.8	1.3	0.3	0.02	0.0	0.0	2.2 <sup>3</sup>	65 <sup>4</sup>	26 <sup>5</sup>	

SPRINGFIELD, ILL.

[From July, 1879, to December, 1891, inclusive.]

January .....	5.9	46.5	64.5	35.5	53.5	36.3	6.5	2.7	1.0	0.0	0.0	0.0	1.6	7	8	<sup>1</sup> 1880. <sup>2</sup> 1886. <sup>3</sup> February and May, 1882. <sup>4</sup> July and August, 1881. <sup>5</sup> February, 1884.
February .....	9.3	50.7	60.7	39.3	49.3	36.0	6.2	5.9	1.8	0.6	0.3	0.0	3.4	8	10	
March .....	6.7	47.6	71.0	25.8	52.4	36.3	5.9	4.3	1.1	0.0	0.0	0.0	1.6	13	7	
April .....	7.8	44.7	56.7	30.0	55.3	31.1	6.9	5.0	1.7	0.0	0.0	0.0	1.7	16	8	
May .....	12.9	46.8	66.7	33.3	53.2	30.6	5.4	7.3	2.4	0.5	0.5	0.0	3.4	10	9	
June .....	13.2	49.4	63.3	36.7	50.6	32.7	5.3	6.6	3.1	1.7	0.0	0.0	2.8	10	7	
July .....	6.4	37.2	58.1	9.7	62.8	27.3	5.0	3.2	1.5	0.2	0.0	0.0	2.2	18	7	
August .....	6.4	33.7	54.8	9.7	66.3	24.6	3.5	4.2	1.0	0.2	0.2	0.0	3.2	15	9	
September .....	8.5	34.4	50.0	13.3	65.6	22.8	3.8	5.4	1.3	0.8	0.3	0.0	3.2	14	5	
October .....	8.5	38.2	54.8	22.6	61.8	27.3	4.0	4.5	2.0	0.2	0.2	0.0	3.2	14	7	
November .....	8.0	38.2	53.3	23.3	61.8	24.8	6.2	5.4	1.3	0.5	0.0	0.0	2.7	10	6	
December .....	6.4	44.9	64.5	19.4	55.1	35.0	5.2	3.5	1.0	0.0	0.2	0.0	3.3	11	7	
Year .....	100.0	42.7	44.8 <sup>1</sup>	36.7 <sup>2</sup>	57.3	30.4	5.3	4.8	1.6	0.4	0.2	0.0	3.4 <sup>3</sup>	17 <sup>4</sup>	10 <sup>5</sup>	

ST. LOUIS, MO.

[From November, 1870, to December, 1891, inclusive.]

January .....	6.3	39.2	67.7	9.7	60.8	29.8	5.2	2.9	0.9	0.2	0.2	0.0	3.5	12	8	<sup>1</sup> 1878. <sup>2</sup> 1871. <sup>3</sup> June and July, 1871. <sup>4</sup> February, 1884.
February .....	8.3	40.5	64.3	21.4	59.5	26.8	7.4	4.4	1.5	0.2	0.2	0.0	4.0	12	11	
March .....	7.9	43.5	64.5	22.6	56.5	31.0	6.3	4.5	1.5	0.2	0.0	0.0	2.3	9	6	
April .....	8.7	42.7	66.7	23.3	57.3	29.7	6.7	3.8	2.1	0.3	0.1	0.0	3.9	13	7	
May .....	10.5	43.9	64.5	25.8	56.0	29.8	5.8	5.5	2.2	0.5	0.2	0.0	3.3	11	7	
June .....	13.4	46.3	63.3	10.0	53.6	29.7	5.9	6.8	2.7	0.5	0.8	0.0	4.5	23	9	
July .....	8.9	35.0	54.8	9.7	65.1	20.5	6.9	4.3	2.6	0.6	0.0	0.0	2.7	19	7	
August .....	6.8	32.1	54.8	6.5	67.9	21.7	4.9	4.3	0.9	0.3	0.0	0.0	2.6	23	8	
September .....	8.4	28.4	53.3	6.7	71.6	17.6	3.5	4.4	1.7	1.0	0.2	0.0	3.2	15	5	
October .....	6.8	30.4	61.3	16.1	69.6	20.6	4.8	2.9	1.5	0.6	0.0	0.0	2.9	15	7	
November .....	7.9	38.3	63.3	16.7	61.6	27.1	3.9	5.2	1.7	0.5	0.0	0.0	2.4	14	7	
December .....	6.1	40.4	71.0	6.5	59.7	31.5	4.0	3.5	1.2	0.1	0.0	0.0	2.6	18	10	
Year .....	100.0	38.4	48.5 <sup>1</sup>	19.7 <sup>2</sup>	61.6	26.4	5.4	4.4	1.7	0.4	0.1	0.0	4.5	28 <sup>3</sup>	11 <sup>4</sup>	

## RAINFALL AND SNOW OF THE UNITED STATES.

TABLE V. — *Details of precipitation.*

ST. PAUL, MINN.

[From November, 1870, to December, 1891, inclusive.]

Month.	Monthly distribution of precipitation.	Percentage of days on which rain fell.			Classification of rainfall: Percentage of days with (or without) rain.								Heaviest rain in one day.	Greatest consecutive No. of days—		Notes.
		Mean.	Max.	Min.	.00	T. to .25	.26 to .50	.51 to 1.00	1.01 to 2.00	2.01 to 3.00	3.01 to 5.00	Over 5.00		Without rain.	With rain.	
January	3.6	37.3	71.0	9.7	62.7	33.9	2.8	0.3	0.3	0.0	0.0	0.0	1.2	16	9	<sup>1</sup> 1884.
February	3.2	37.8	79.0	3.6	62.2	35.0	1.7	1.1	0.0	0.0	0.0	0.0	0.8	13	8	<sup>2</sup> 1871.
March	35.1	38.6	58.1	19.3	61.4	33.4	3.4	1.7	0.2	0.0	0.0	0.0	1.3	14	9	<sup>3</sup> September and October, 1872.
April	33.3	38.7	63.3	13.3	61.3	29.9	4.7	2.8	1.3	0.0	0.0	0.0	1.9	13	8	<sup>4</sup> May and June, 1883.
May	11.9	42.6	67.7	19.6	57.4	29.2	7.2	4.5	1.5	0.2	0.0	0.0	2.1	12	8	
June	15.6	45.1	66.7	30.0	54.9	28.3	8.1	5.7	2.0	0.8	0.2	0.0	2.8	8	9	
July	11.9	39.8	60.0	12.9	60.2	27.7	6.0	3.5	1.8	0.6	0.2	0.0	3.7	16	7	
August	13.3	37.8	54.8	19.6	62.2	25.0	4.9	4.9	2.5	0.5	0.0	0.0	2.3	15	7	
September	11.2	39.8	60.0	13.3	60.2	27.3	7.0	3.5	1.9	0.1	0.0	0.0	2.7	13	7	
October	6.9	33.0	53.1	9.7	67.0	25.4	4.3	2.3	1.0	0.0	0.0	0.0	2.0	28	6	
November	4.3	36.2	95.0	18.0	63.8	31.7	2.7	1.3	0.5	0.0	0.0	0.0	1.2	12	8	
December	4.7	40.6	95.0	22.7	59.4	36.2	3.0	1.2	0.2	0.0	0.0	0.0	1.5	12	10	
Year	100.0	38.9	54.1 <sup>1</sup>	27.1 <sup>2</sup>	61.1	30.3	4.6	2.7	1.1	0.2	0.03	0.0	3.7	30 <sup>3</sup>	11 <sup>4</sup>	

ST. VINCENT, MINN.

[From September, 1880, to December, 1891, inclusive.]

January	3.1	38.7	61.3	19.4	61.3	36.9	1.5	0.3	0.0	0.0	0.0	0.0	0.6	11	6	<sup>1</sup> 1891.
February	3.1	40.3	64.3	17.9	59.7	38.4	1.6	0.3	0.0	0.0	0.0	0.0	0.6	12	8	<sup>2</sup> 1883.
March	3.1	32.6	58.1	16.1	67.4	30.5	2.1	0.0	0.0	0.0	0.0	0.0	0.4	18	5	<sup>3</sup> May, 1894.
April	6.8	33.0	53.3	23.3	67.0	27.3	3.6	2.1	0.0	0.0	0.0	0.0	0.9	15	7	<sup>4</sup> February, 1881; September and October, 1894.
May	9.5	32.0	48.4	9.7	68.0	23.5	3.8	4.7	0.0	0.0	0.0	0.0	1.0	21	6	
June	19.4	40.0	53.3	30.0	60.0	27.8	5.2	4.3	2.1	0.3	0.3	0.0	4.5	9	6	
July	14.2	44.6	64.5	25.8	55.4	35.2	4.7	3.5	1.2	0.0	0.0	0.0	1.9	8	5	
August	12.5	32.3	54.8	12.9	67.7	24.0	4.4	2.1	1.2	0.6	0.0	0.0	2.8	12	6	
September	11.0	34.7	50.0	13.3	65.3	25.3	5.3	3.6	0.3	0.3	0.0	0.0	2.4	13	5	
October	9.5	36.8	48.4	19.4	63.2	29.3	2.9	3.8	0.8	0.0	0.0	0.0	1.3	10	6	
November	3.1	36.4	56.7	13.3	63.6	35.6	0.6	0.3	0.0	0.0	0.0	0.0	0.6	17	7	
December	3.7	39.0	64.5	19.4	61.0	36.0	2.7	0.3	0.0	0.0	0.0	0.0	0.8	17	5	
Year	100.0	36.7	43.3 <sup>1</sup>	26.5 <sup>2</sup>	63.3	30.8	3.2	2.1	0.5	0.1	0.02	0.0	4.5	21 <sup>3</sup>	8 <sup>4</sup>	

TITUSVILLE, FLA.

[From July, 1877, to December, 1892, inclusive.]

January	5.5	33.5	58.1	16.1	66.5	24.5	4.5	1.3	3.2	0.0	0.0	0.0	1.9	13	5	<sup>1</sup> 1891.
February	6.7	38.0	50.0	17.9	62.0	23.2	6.3	5.6	2.8	0.0	0.0	0.0	1.7	11	6	<sup>2</sup> 1888.
March	5.3	25.8	29.0	22.6	74.2	18.1	3.9	1.3	1.3	1.3	0.0	0.0	2.5	10	4	<sup>3</sup> December, 1888.
April	4.3	26.0	46.7	10.0	74.0	18.0	3.3	2.7	2.0	0.0	0.0	0.0	1.8	22	8	<sup>4</sup> April and May, 1892.
May	9.4	32.3	64.5	9.7	67.7	18.7	3.9	3.9	3.9	1.9	0.0	0.0	2.8	20	9	<sup>5</sup> June, 1889; May and June, 1890.
June	15.6	55.3	63.3	40.0	44.7	28.0	11.3	7.3	4.7	4.0	0.0	0.0	2.8	9	15	
July	12.0	48.9	67.7	22.6	51.1	27.4	5.9	11.8	3.2	0.5	0.0	0.0	2.9	10	7	
August	6.2	44.1	54.8	32.3	55.9	30.1	7.0	5.9	1.1	0.0	0.0	0.0	1.4	8	7	
September	12.7	63.3	83.3	43.3	36.7	33.9	10.6	10.6	5.0	2.8	0.5	0.0	3.2	5	11	
October	10.1	36.0	48.4	16.1	64.0	19.4	4.8	5.9	4.3	0.5	1.1	0.0	3.9	19	10	
November	6.5	31.7	43.3	20.0	68.3	22.2	5.0	1.7	1.7	1.1	0.0	0.0	2.9	12	7	
December	5.7	31.7	54.8	6.5	68.3	23.1	3.2	2.7	2.2	0.0	0.0	0.0	5.3	12	5	
Year	100.0	38.9	43.6 <sup>1</sup>	35.5 <sup>2</sup>	61.1	23.9	5.8	5.1	3.0	1.0	0.1	0.04	5.3 <sup>3</sup>	27 <sup>4</sup>	15 <sup>5</sup>	

TOLEDO, OHIO.

[From January, 1871, to December, 1891, inclusive.]

January	7.1	53.8	80.6	22.6	46.2	46.1	5.1	2.0	0.6	0.0	0.0	0.0	1.5	11	8	<sup>1</sup> 1876.
February	6.5	52.1	82.1	14.3	47.9	43.7	4.7	3.0	0.5	0.2	0.0	0.0	2.3	13	12	<sup>2</sup> 1871.
March	6.9	50.2	71.0	19.4	49.8	41.3	5.8	2.6	0.5	0.0	0.0	0.0	1.3	9	10	<sup>3</sup> 1871.
April	6.9	43.3	73.3	30.0	56.7	33.7	6.2	3.0	0.5	0.0	0.0	0.0	1.4	11	9	<sup>4</sup> September and October, 1885.
May	10.0	42.4	64.5	25.8	57.6	30.4	5.8	4.0	2.2	0.0	0.0	0.0	1.7	10	8	<sup>5</sup> February and March, 1889.
June	11.2	43.8	63.3	20.0	56.2	29.0	6.5	5.7	2.5	0.0	0.0	0.0	1.6	14	9	
July	10.6	34.6	48.4	22.6	65.4	22.0	5.5	4.9	2.2	0.0	0.0	0.0	1.8	12	8	
August	8.7	34.6	61.3	16.1	65.4	23.5	4.5	4.8	1.7	0.2	0.0	0.0	2.1	13	10	
September	7.5	34.0	63.3	13.3	66.0	24.6	4.9	3.0	1.4	0.0	0.0	0.0	1.8	17	9	
October	8.1	40.9	67.7	19.4	59.1	30.6	5.8	3.4	0.8	0.2	0.2	0.0	3.1	13	9	
November	9.0	46.2	70.0	23.3	53.8	35.4	5.2	3.8	1.6	0.0	0.2	0.0	3.2	11	10	
December	7.5	55.6	74.2	32.3	44.4	46.5	5.5	2.3	1.2	0.0	0.0	0.0	1.9	14	9	
Year	100.0	44.3	52.2 <sup>1</sup>	29.3 <sup>2</sup>	55.7	33.9	5.5	3.5	1.3	0.05	0.03	0.0	3.2 <sup>3</sup>	18 <sup>4</sup>	13 <sup>5</sup>	

VICKSBURG, MISS.

[From October, 1871, to December, 1891, inclusive.]

January	9.8	45.6	74.2	22.6	54.4	27.2	6.0	6.9	4.2	1.1	0.2	0.0	3.2	10	12	<sup>1</sup> 1882.
February	8.4	43.5	71.5	31.0	56.5	25.1	7.4	5.7	4.1	1.2	0.0	0.0	2.6	12	10	<sup>2</sup> 1881.
March	11.6	36.3	48.3	12.9	63.7	16.4	5.8	6.8	5.5	1.0	0.6	0.2	5.4	16	9	<sup>3</sup> July and August, 1874.
April	11.1	35.0	53.3	16.7	65.0	17.5	5.0	6.0	3.7	2.0	0.8	0.0	4.5	12	7	<sup>4</sup> January, 1877; November and December, 1880.
May	8.7	30.5	41.9	12.9	69.5	16.5	5.0	3.7	3.2	1.6	0.5	0.0	4.3	18	5	
June	7.6	40.0	70.0	16.7	60.0	24.1	5.7	5.5	4.2	0.5	0.0	0.0	2.4	15	8	
July	7.2	41.0	70.9	19.4	59.0	26.6	5.0	5.0	4.0	0.4	0.0	0.0	2.5	16	9	
August	6.1	35.0	61.3	12.9	65.0	23.4	4.0	4.7	1.8	1.1	0.0	0.0	2.8	22	7	
September	6.8	30.9	66.7	10.0	69.1	18.6	3.8	4.0	3.0	1.1	0.2	0.2	5.2	16	9	
October	5.1	24.6	41.9	6.4	75.4	15.2	3.1	3.5	1.7	0.9	0.2	0.0	3.8	18	6	
November	9.0	35.7	60.0	20.0	64.3	20.0	6.5	3.5	4.0	1.1	0.6	0.0	4.0	13	7	
December	8.6	38.3	67.7	9.7	61.7	22.9	4.9	5.5	3.7	0.6	0.5	0.2	5.1	21	9	
Year	100.0	36.4	43.0 <sup>1</sup>	28.8 <sup>2</sup>	63.9	21.1	5.1	5.2	3.6	1.1	0.3	0.05	5.4	28 <sup>3</sup>	12 <sup>4</sup>	

## RAINFALL AND SNOW OF THE UNITED STATES.

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TABLE V.—Details of precipitation—Continued.

YANKTON, S. DAK.

[From January, 1873, to December, 1891, inclusive.]

Month.	Monthly distribution of precipitation.	Percentage of days on which rain fell.			Classification of rainfall: Percentage of days with (or without) rain.								Heaviest rain in one day.	Greatest consecutive No. of days—		Notes.
		Mean.	Max.	Min.	.00	T. to .25	.26 to .50	.51 to 1.00	1.01 to 2.00	2.01 to 3.00	3.01 to 5.00	Over 5.00		Without rain.	With rain.	
	Per ct.												Inches.			
January .....	2.3	33.9	54.8	12.9	66.1	32.4	1.3	0.2	0.0	0.0	0.0	0.0	0.5	14	6	1888.
February .....	3.0	33.5	82.7	7.1	66.5	31.1	1.6	0.6	0.2	0.0	0.0	0.0	1.1	22	14	21880.
March .....	4.5	36.6	80.6	16.0	63.4	32.3	2.7	1.4	0.2	0.0	0.0	0.0	1.2	14	9	31880.
April .....	11.6	39.8	70.0	16.6	60.2	29.0	4.1	3.9	2.4	0.2	0.2	0.0	3.9	14	11	41880.
May .....	15.8	46.5	87.0	25.8	53.5	31.2	6.5	5.7	2.5	0.6	0.0	0.0	2.5	11	14	51880.
June .....	16.1	42.3	63.3	26.1	57.7	26.3	6.5	5.3	3.7	0.2	0.3	0.0	3.2	12	8	61880.
July .....	13.9	37.8	58.0	16.0	62.2	25.6	4.2	4.8	2.7	0.3	0.2	0.0	3.1	13	6	71880.
August .....	11.6	35.5	90.3	16.0	64.5	24.9	3.9	3.6	2.9	0.2	0.0	0.0	2.5	16	11	81880.
September .....	10.2	32.1	63.3	10.0	67.9	23.5	3.7	1.9	2.1	0.7	0.2	0.0	3.4	17	7	91880.
October .....	5.3	27.0	67.7	12.9	73.0	20.9	3.0	2.9	0.2	0.0	0.0	0.0	1.3	20	13	101880.
November .....	2.3	24.6	53.3	10.0	75.4	23.0	1.1	0.3	0.0	0.2	0.0	0.0	2.2	23	7	111880.
December .....	3.4	31.7	61.2	12.9	68.3	29.0	1.4	1.1	0.2	0.0	0.0	0.0	1.2	25	7	121880.
Year .....	100.0	35.1	65.3 <sup>1</sup>	24.0 <sup>2</sup>	64.9	27.4	3.3	2.7	1.4	0.2	0.08	0.0	3.9	32 <sup>3</sup>	14 <sup>4</sup>	

WASHINGTON, D. C.

[From November, 1870, to December, 1891, inclusive.]

January .....	7.8	42.7	67.7	19.4	57.3	28.5	6.8	5.1	2.0	0.3	0.0	0.0	2.3	13	7	11890.
February .....	7.5	43.3	67.9	14.3	56.7	27.3	7.4	6.1	2.5	0.0	0.0	0.0	1.9	20	12	21890.
March .....	9.8	45.8	67.7	25.8	54.2	29.8	6.8	5.7	3.2	0.3	0.0	0.0	2.8	10	7	31890.
April .....	7.2	42.7	66.7	26.7	57.3	30.0	7.0	3.5	1.7	0.3	0.2	0.0	3.2	8	8	41890.
May .....	8.7	42.6	67.7	19.4	57.4	26.4	7.1	9.9	1.7	0.5	0.0	0.0	2.4	14	11	51890.
June .....	9.6	42.4	63.3	23.3	57.6	28.3	5.5	4.0	3.5	1.0	0.1	0.0	4.2	12	7	61890.
July .....	10.7	41.5	58.1	25.8	58.5	27.5	4.9	4.3	3.1	1.1	0.6	0.0	4.2	10	7	71890.
August .....	9.6	43.8	61.3	25.8	56.2	29.8	4.9	4.5	3.7	0.9	0.0	0.0	2.8	10	10	81890.
September .....	8.7	34.0	66.7	13.3	66.0	21.5	4.1	4.0	3.8	0.3	0.3	0.0	4.2	14	9	91890.
October .....	7.4	34.5	67.7	9.7	65.5	24.4	4.0	3.8	1.4	0.3	0.6	0.0	4.0	18	6	101890.
November .....	6.3	37.6	60.0	16.7	62.4	26.5	5.5	3.6	1.8	0.2	0.0	0.0	2.8	11	7	111890.
December .....	6.7	37.6	54.8	22.6	62.4	26.2	4.8	4.0	2.3	0.3	0.0	0.0	2.4	14	8	121890.
Year .....	100.0	40.8	54.0 <sup>1</sup>	30.4 <sup>2</sup>	59.2	27.2	5.7	4.6	2.6	0.5	0.2	0.0	4.2	26 <sup>3</sup>	12 <sup>4</sup>	

WHIPPLE BARRACKS AND PRESCOTT, ARIZ.

[From January, 1870, to December, 1891, inclusive.]

January .....	8.3	12.6	35.5	0.0	87.4	8.4	2.0	1.2	0.6	0.0	0.3	0.0	4.2	31	8	No record from November 1, 1874, to May 31, 1875. 1883. 21883. 31883. 41883. 51883. 61883. 71883. 81883. 91883. 101883.
February .....	10.7	18.5	41.4	3.4	81.5	10.6	3.9	2.4	1.7	0.0	0.0	0.0	1.7	24	6	
March .....	9.5	15.4	45.2	0.0	84.6	9.8	2.8	1.8	0.9	0.0	0.0	0.0	1.9	31	6	
April .....	5.3	14.8	30.0	3.3	85.2	10.8	2.5	1.3	0.2	0.0	0.0	0.0	1.2	25	5	
May .....	3.6	8.3	19.4	0.0	91.7	6.3	0.9	0.9	0.2	0.0	0.0	0.0	1.1	31	4	
June .....	1.2	4.7	20.0	0.0	95.3	4.1	0.5	0.2	0.0	0.0	0.0	0.0	0.5	30	4	
July .....	17.7	30.1	67.7	9.7	69.9	18.3	6.3	3.8	1.3	0.3	0.0	0.0	2.5	18	7	
August .....	17.2	35.2	61.3	6.5	64.8	22.9	6.0	5.0	1.2	0.1	0.0	0.0	2.7	15	9	
September .....	7.1	14.2	40.0	0.0	85.8	10.0	2.4	0.8	0.9	0.2	0.0	0.0	2.2	30	5	
October .....	4.1	10.1	25.8	0.0	89.9	7.0	1.8	1.0	0.3	0.0	0.0	0.0	1.4	31	5	
November .....	4.7	8.3	50.0	0.0	91.7	4.4	2.1	1.1	0.6	0.0	0.0	0.0	1.6	30	7	
December .....	10.6	16.4	48.4	0.0	83.6	9.2	2.5	3.2	1.5	0.0	0.0	0.0	1.6	31	8	
Year .....	100.0	15.7	27.6 <sup>1</sup>	8.5 <sup>2</sup>	84.3	10.2	2.8	1.9	0.8	0.05	0.02	0.0	4.2 <sup>3</sup>	88 <sup>4</sup>	9 <sup>5</sup>	

WILMINGTON, N. C.

[From January, 1871, to December, 1891, inclusive.]

January .....	7.0	39.5	58.1	19.4	60.5	24.9	6.8	5.4	1.8	0.3	0.3	0.0	3.5	18	8	11891.
February .....	5.7	38.9	67.9	21.4	61.1	23.6	8.6	4.0	2.5	0.0	0.2	0.0	3.2	10	6	21891.
March .....	7.5	36.3	61.3	16.1	63.7	22.6	4.6	6.3	2.2	0.2	0.5	0.0	4.8	15	8	31891.
April .....	5.5	36.8	43.3	16.7	69.2	19.0	4.0	4.8	2.9	0.2	0.0	0.0	2.6	19	5	41891.
May .....	7.5	32.4	54.8	16.1	67.6	18.6	4.6	4.9	3.2	1.1	0.0	0.0	2.8	17	9	51891.
June .....	10.5	39.7	56.7	23.3	60.3	20.3	6.8	6.7	4.6	0.8	0.2	0.3	7.0	10	8	61891.
July .....	12.8	41.5	74.2	25.8	55.5	22.9	7.1	8.0	4.6	1.2	0.6	0.2	7.3	15	10	71891.
August .....	13.9	48.2	64.5	22.6	51.8	24.3	9.2	7.7	4.6	1.5	0.8	0.2	8.0	12	11	81891.
September .....	12.0	34.4	67.3	16.7	65.6	17.8	6.0	4.1	3.3	1.1	1.9	0.2	6.6	13	9	91891.
October .....	7.3	26.4	38.7	6.4	73.6	13.7	4.5	4.3	2.8	0.6	0.6	0.0	4.2	26	7	101891.
November .....	4.6	28.4	50.0	10.0	71.6	18.4	4.3	3.8	1.9	0.0	0.0	0.0	2.0	18	6	111891.
December .....	5.7	34.9	57.6	3.2	65.1	22.6	5.7	4.5	2.0	0.2	0.0	0.0	3.0	30	7	121891.
Year .....	100.0	36.2	46.6 <sup>1</sup>	31.2 <sup>2</sup>	63.8	20.7	6.0	5.4	3.0	0.6	0.4	0.1	8.0	32 <sup>3</sup>	11 <sup>4</sup>	

YUMA, ARIZ.

[From October, 1875, to December, 1891, inclusive.]

January .....	12.5	7.7	25.8	0.0	92.3	6.1	1.0	0.6	0.0	0.0	0.0	0.0	0.9	31	4	11884.
February .....	18.7	11.5	28.6	0.0	88.5	9.0	0.9	0.9	0.7	0.0	0.0	0.0	1.2	28	4	21884.
March .....	6.2	8.5	32.3	0.0	91.5	7.9	0.4	0.2	0.0	0.0	0.0	0.0	0.9	31	4	31884.
April .....	3.2	5.0	13.3	0.0	95.0	4.6	0.4	0.0	0.0	0.0	0.0	0.0	0.3	30	2	41884.
May .....	1.6	2.4	19.4	0.0	97.6	2.2	0.2	0.0	0.0	0.0	0.0	0.0	0.3	31	5	51884.
June .....	1.6	1.7	6.7	0.0	98.3	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.1	30	2	61884.
July .....	3.2	7.7	19.4	0.0	92.3	7.1	0.4	0.2	0.0	0.0	0.0	0.0	0.6	31	2	71884.
August .....	12.5	12.5	29.0	0.0	87.5	11.5	0.4	0.2	0.4	0.0	0.0	0.0	1.8	31	4	81884.
September .....	3.2	4.0	10.0	0.0	96.0	3.2	0.4	0.4	0.0	0.0	0.0	0.0	0.8	30	3	91884.
October .....	9.3	3.6	9.7	0.0	96.4	2.6	0.4	0.2	0.4	0.0	0.0	0.0	1.7	31	3	101884.
November .....	9.3	4.7	20.0	0.0	95.3	3.7	0.2	0.6	0.2	0.0	0.0	0.0	1.7	30	4	111884.
December .....	18.7	9.9	32.3	0.0	90.1	7.5	1.4	0.8	0.2	0.0	0.0	0.0	1.0	31	6	121884.
Year .....	100.0	6.6	12.0 <sup>1</sup>	3.3 <sup>2</sup>	93.4	5.6	0.5	0.3	0.2	0.0	0.0	0.0	1.7	167 <sup>3</sup>	6 <sup>4</sup>	

## RAINFALL AND SNOW OF THE UNITED STATES.

TABLE VI.—*Heaviest rainfalls at selected representative stations.*

Station.	No. of years.	Year.	Month.	72 hours.	48 hours.	24 hours.	Station.	No. of years.	Year.	Month.	72 hours.	48 hours.	24 hours.
Albany, N. Y. ....	18	49-3	8-9	5-1	4-3	3-2	Memphis, Tenn. ....	21	73-4	18-2	13-6	13-4	8-9
Alpena, Mich. ....	19	45-5	13-2	6-0	5-2	3-9	Mobile, Ala. ....	21	90-9	15-2	12-9	10-8	7-3
Assiniboine, Fort, Mont. ....	11	25-5	9-7	4-3	4-3	3-3	Montgomery, Ala. ....	19	64-1	11-6	8-4	8-1	6-0
Atlanta, Ga. ....	21	65-0	15-8	10-1	9-6	7-4	Nashville, Tenn. ....	21	67-3	14-5	8-0	5-6	5-2
Augusta, Ga. ....	22	57-1	11-9	6-7	6-1	4-9	New Orleans, La. ....	21	85-6	22-7	11-4	9-8	8-9
Bismarck, N. Dak. ....	17	31-0	6-6	3-5	3-4	2-4	Norfolk, Va. ....	22	70-9	11-9	7-2	6-1	4-6
Boston, Mass. ....	22	65-6	11-0	6-4	6-2	4-4	North Platte, Nebr. ....	17	30-1	8-5	3-3	3-3	3-2
Buffalo, N. Y. ....	22	60-3	10-6	4-4	3-5	3-2	Omaha, Nebr. ....	22	48-8	12-7	5-5	5-4	5-0
Buford Fort, N. Dak. ....	24	23-3	7-1	3-7	3-6	3-2	Oswego, N. Y. ....	22	55-9	10-5	4-5	4-0	3-6
Brownsville, Tex. ....	15	60-3	30-6	.....	.....	.....	Palestine, Tex. ....	10	59-6	17-2	7-5	6-7	4-4
Cairo, Ill. ....	20	61-5	15-0	5-7	5-2	4-2	Philadelphia, Pa. ....	66	61-2	16-8	10-1	8-4	5-2
Charleston, S. C. ....	64	78-4	19-2	11-6	9-6	8-3	Pittsburg, Pa. ....	21	50-6	9-5	4-5	4-2	3-6
Cheyenne, Wyo. ....	22	19-3	4-8	2-4	2-2	1-9	Port Huron, Mich. ....	17	41-0	7-4	3-8	3-8	3-3
Chicago, Ill. ....	22	45-8	11-3	4-2	6-4	5-6	Portland, Oreg. ....	22	67-2	20-1	10-8	10-8	6-7
Cincinnati, Ohio. ....	21	54-8	11-7	4-6	3-2	3-0	Prescott, Ariz. ....	20	26-7	8-0	4-9	4-3	5-0
Cleveland, Ohio. ....	22	53-6	10-2	5-1	5-0	3-6	Red Bluff, Cal. ....	20	49-1	20-7	6-3	5-9	3-0
Deadwood, S. Dak. ....	9	33-9	10-3	.....	.....	.....	St. Louis, Mo. ....	52	68-8	17-1	6-7	6-7	4-5
Denver, Colo. ....	22	21-5	8-6	3-8	6-7	6-5	St. Paul, Minn. ....	22	39-2	11-7	5-1	4-6	3-7
Dodge City, Kans. ....	17	33-7	12-8	5-9	4-1	3-2	St. Vincent, Minn. ....	20	33-9	9-8	4-6	4-6	4-5
Dubuque, Iowa. ....	32	55-4	10-5	5-8	5-4	4-5	Sacramento, Cal. ....	42	34-8	15-0	8-7	8-4	5-3
Duluth, Minn. ....	21	45-3	11-5	4-2	4-0	3-0	Salt Lake City, Utah. ....	24	38-0	10-0	2-6	2-4	2-0
Eastport, Me. ....	18	64-6	13-2	7-1	6-3	5-5	San Antonio, Tex. ....	21	42-0	11-4	6-9	5-8	4-5
El Paso, Tex. ....	28	21-9	8-2	2-2	2-1	2-0	San Diego, Cal. ....	42	27-5	9-0	4-2	3-0	2-8
Fort Smith, Ark. ....	17	61-0	14-3	8-5	6-3	5-1	San Francisco, Cal. ....	42	38-7	24-4	6-8	5-9	4-7
Galveston, Tex. ....	20	67-0	26-0	12-7	10-1	7-9	Santa Fe, N. Mex. ....	33	24-9	7-9	3-6	2-5	1-5
Helena, Mont. ....	10	20-1	4-7	3-2	2-7	2-2	Shreveport, La. ....	20	66-5	15-6	8-8	8-0	6-9
Huron, S. Dak. ....	10	28-1	8-1	3-3	3-2	2-1	Spokane, Wash. ....	10	25-7	5-1	2-4	2-3	2-2
Indianapolis, Ind. ....	22	57-5	13-1	6-4	6-0	4-3	Toledo, Ohio. ....	21	45-8	8-5	3-5	3-5	3-2
Jacksonville, Fla. ....	22	82-1	21-1	10-3	8-6	6-2	Vicksburg, Miss. ....	20	84-3	22-2	8-1	7-0	5-4
Keokuk, Iowa. ....	20	51-5	12-7	5-5	5-3	4-8	Walla Walla, Wash. ....	23	40-6	12-8	2-1	1-9	1-6
Key West, Fla. ....	21	58-4	19-8	11-8	11-0	8-2	Washington, D. C. ....	22	61-3	12-9	5-3	4-7	4-2
Knoxville, Tenn. ....	21	73-8	17-3	7-8	6-5	5-6	Winnemucca, Nev. ....	20	18-2	5-2	1-9	1-8	1-1
Leavenworth, Kans. ....	55	59-8	15-8	4-4	5-1	3-6	Yuma, Ariz. ....	16	5-9	2-5	2-4	2-4	1-7
Lynchburg, Va. ....	20	60-5	11-8	6-2	5-5	4-7							



